New Orleans Medical
and
Surgical Journal

Vol. 76 MARCH, 1924 No. 9

NEPHROLITHIASIS AS A COMPLICATION OF PREGNANCY.

By Aime Paul Heineck, M.D.,
Chicago, Ill.

A somewhat exhaustive survey of the literature of the subject supplemented by a careful analytical study of my private and hospital cases leads me to formulate the following conclusions:

Renal lithiasis associated with, or complicating pregnancy has not received adequate study. Not infrequently, it escapes detection; not uncommonly, it is misdiagnosed and therefore injudiciously treated.

Nephrolithiasis occurs at all periods of the child-bearing age; in primiparae, secundiparae, and multiparae. It may coexist with concretions in other organs. It is observed in pregnancies normal or abnormal in type, location and evolution; it may be one of two more pathological states coexisting with, and influencing or not, the evolution of an otherwise normal gestation.

Renal calculi, associated with or complicating pregnancy, are unilateral or bilateral, single, double or multiple and (like calculi in the non-pregnant) vary in location, shape, size, mobility chemical composition and other characteristics. Their formation either antedates, is simultaneous with, or consecutive to, the first or any succeeding pregnancy of the patient at hand.

The calculi excepted, the calculous kidney may show but slight structural deviation from the normal; or it may be anomalous in type (single kidney), (fused kidney), b. location (ectopic kidney), or c. structure (polycystic kidney, hydronephrosis, pyonephrosis). The anatomical anomalies presented by a calculous kidney are congenital, acquired, or both.

If acquired, they are either of independent origin, or determined by the presence of calculi. Renal calculi, sooner or later, provoke structural kidney changes, degenerative, inflammatory, hyperplastic or neoplastic, in nature.

Nephrolithiasis, occurring in pregnant women, determines the same anatomical changes, in the affected kidney as are found in the calculous kidney of the non-pregnant. These structural changes, the resultant of irritation, obstruction and infection, manifest themselves by exudative, proliferating and degenerative processes, often suppurative in character; rarely, neoplastic. Under the influence of stones, the epithelium of the renal tubules may necrose, form cysts or become malignant. In the absence of infection, the lesions presented are those of atrophic and diffuse nephritis. Generally, the aseptic stage of calculus is brief. Infection, sooner or later, supervenes and gives rise to one or more of the following conditions: Pyelonephritis with or without abscess formation, perinephritis, sclerotic or suppurative pyonephrosis, and partial or complete conversion of the kidney into a sclerolipomatous mass.

In nephrolithiasis, early diagnosis leads to the institution of logical treatment before irreparable kidney changes have taken place. An accurate diagnosis presupposes an intelligent interpretation of the subjective symptoms, of the bacterial, chemical and microscopical urinary findings, of the X-ray data and also the combined use of the cystoscope and the X-rays as employed in

pyelography. In every case, there should be a complete roentgenographic exposure of the urinary bladder of both kidneys and both ureters. The skiagraph is a permanent record. Skiagraphy shows (a) whether calculi are present in one or both kidneys; (b) the number, size and shape of the calculi; (c) their location—pelvis, calyx, parenchyma, or pyo—or hydronephritis cavities; (d) the presence of extra-renal calcareous deposits.

Pyelography, a most valuable diagnostic procedure, should only be employed when the dangers attending its use are far outweighed by the information which it offers. It enables us to determine the presence or absence of pathologic changes in the reno-pelvic outline and whether a doubtful shadow is or is not extra-renal.

Pain, local and radiating, is the most important subjective symptom. Its character and intensity are influenced by many factors; size, nature and mobility of the calculus or calculi, degree and acuity of infection, etc. It is provoked by walking, fatigue or exercise, and subsides with rest. Hematuria, intermittent or continuous, scant or profuse, and pyuria are also important symptoms.

In cases of persistent lumbar pain, a radiograph of the kidneys, ureters and urinary bladder is of great service to the clinician. Radiography of the urinary system has limitations, determined to a large extent by:

a. defective technique;
b. defective interpretation of shadows seen in the negative;
c. impossibility of obtaining a satisfactory negative;
d. defects in negatives;
e. caseous kidneys;
f. calcified mesenteric glands;
g. phleboliths;
h. bony deposits in the pelvic ligaments.

If the symptoms be mild, obscure, indefinite and identification of the X-ray shadows uncertain, the medical treatment of renal lithiasis is to be instituted and the pregnancy is permitted to proceed undisturbed. After the puerperium, or better, after the period of lactation, operative treatment is to be urged in suitable cases.

As many renal stones are spontaneously expelled, a patient should be kept under observation for a limited period of time and nature given full opportunity to remove the stone or stones without recourse to surgical intervention. Operations for renal stones give such good immediate and remote results, that treatment with supposed solvents find few advocates.

In the absence of contra-indications operation can be performed with safety up to the sixth month of pregnancy, to both mother and child. Up to that time in the absence of contra-indications operative treatment is to be instituted in cases.

(a) of renal calculi too large to be spontaneously expelled through the natural channels even if the symptoms be recent in origin, or slight in intensity, nothing is gained by delay. Be not too optimistic as to small renal calculi; of all calculi, they are the ones most apt to lodge and become impacted in the ureter.

(b) of multiple calculi, irrespective of site, size, or number.

(c) of recurring attacks of excessive pain localized to, or radiating from the renal region.

(d) of profuse or continuous hematuria.

(e) of acute pyelonephritis, of cortical or pericortical pus formation and pus collection, and bilateral pyelonephritis.

(f) of a calculus giving rise to urinary retention within the renal pelvis. Such retention, always a menace to kidney integrity may lead to hydronephrosis, pyonephrosis, etc. A stone in the cortex of the kidney does not furnish as urgent an indication for operation as one in the renal pelvis.

(g) Obstructive calculous anuria. This condition calls for immediate relief.

(h) of bilateral nephrolithiasis. In bilateral cases, first operate on the least involved kidney provided there is no acute pathological process in the other kidney, requiring immediate attention. In from two to three weeks, operate on the other kidney. If one of the kidneys be the seat of acute complications, it should be the first to receive surgical relief.

(i) of stone in one kidney and disease in the other.

(j) of renal lithiasis co-existing with tubercular or neoplastic disease of the same kidney.

(k) of a calculus or calculi in a patient's only kidney; here, the patient's existence depends on the unhampered function of his remaining or sole kidney.

Nephrolithiasis and its complications are subjected for cure to the following operations, each of which has its respective indications, limitations and increasing field of usefulness—pelviolithotomy, nephrolithotomy, nephrectomy, nephrostomy, incision and evacuation of perinephric phlegmons. It may be necessary to supplement any of the fore-mentioned operations with temporary drainage of the renal pelvis, renal paranchyma, or perirenal regions. Always ascertain, before operating for renal stones the functional efficiency of the opposite kidney; as, the necessity for a nephrectomy may arise unexpectedly during the course of any kidney operation.

Pelviotomy or pelvic-lithotomy, the operation most generally used for nephrolithiasis, is well adapted to the removal of stones present in the renal pelvis. With it, dangerous hemorrhage, immediate, consecutive or secondary is of rare occurrence. Pyelotomy does not injure the renal parenchyma. It is unsuited for removal of voluminous or branched calculi. The pelvis is to be incised on its posterior vascular aspect.

Nephrotomy or nephrolithotomy, is attended with destruction of kidney tissue, followed at times by secondary hemorrhage. The friability of the kidney tissue may be such that the stitches tear out. Nephrotomy permits a thorough exploration of the organ and a complete removal of the calculi. It possesses the signal advantage of not entailing the sacrifice of the kidney. It is employed also when calculus or calculi lie just beneath the renal surface, when the renal pelvis is abnormally small or if the kidney is so bound by adhesions that its exteriorization is inadvisable. If pyelotomy be out of the question, nephrotomy is the operation of election for nephrolithiasis. Usually all the calculi can be removed through a large incision; in special cases, several small incisions may be made. If infection exists, pass a drain through the cut cortex to the renal pelvis, also pass a drain to the kidney.

Nephrectomy is indicated:

(a) In multiple, parenchymatous large coral-shaped calculi unsuited to pyelotomy or nephrotomy.

(b) In renal hemorrhage that cannot be checked.

(c) In cases presenting advanced necrotic, suppurative or destructive renal changes.

(d) When the kidney is reduced to a mere shell.

(e) When the kidney has been transformed into a sclero-lipomatous mass.

(f) If it seems probable that nephrolithotomy will leave a permanent urinary fistula.

(g) In chronic fistulae of the kidney, pelvis or ureter which have not yielded to non-operative treatment.

(h) In malignant disease such as tuberculosis, cancer, etc., in a stone-bearing kidney.

If there be doubt as to the functional integrity of the other kidney, nephrectomy has had to be performed during the actual existence of pregnancy in many cases with satisfactory results as regards the mother, the continuance of pregnancy and the health of the child.

Nephrolithiasis in pregnant women calls for the same operative procedure as in the non-pregnant. In the pregnant these operative procedures have the same indications, limitations, palliative and curative efficacy as in the non-pregnant. During pregnancy, the lumbar route of approach to the kidney is the only one that can be considered. Pregnancy apparently does not unfavorably influence the prognosis of operations for the relief of nephrolithiasis.

Operations for the relief and cure of nephrolithiasis and its various complications do not, any more than other major abdominal operation such as appendectomy, cholecystectomy, etc., unfavorably influence the course of pregnancy. They do not jeopardize the foetal or maternal life.

In the pregnant, after operation performed for nephrolithiasis and any of its various complications, gestation usually follows its evolution undisturbed and is but slightly more hazardous to

mother and child than pregnancy under normal conditions, provided the remaining kidney is functioning normally. Parturition and lactation are uninfluenced. The nephrectomized woman may be permitted to marry, or if married to undertake the risk of pregnancy, provided she is in otherwise fit condition. As a rule, there is no reason to interrupt pregnancy occuring in women with only a single kidney. If the remaining kidney is healthy, the strain of pregnancy can be fairly well borne. The development and persistence of serious symptoms may, if operative treatment be absolutely contra-indicated, call for the induction either of abortion or of premature labor.

CONSERVATISM IN DEALING WITH PELVIC INFECTION.*

By Thomas E. Sellers, M.D., F.A.C.S.,
New Orleans.

The high mortality and dreadful morbidity of pelvic infection is a well known subject. About one-third of gynecology deals with pelvic infection. The records of Charity Hospital show 1,207 cases of pelvic infection out of 3,667 gynecological cases handled in 1921 and 1922. On account of the frequency of pelvic infection I feel that this subject cannot be too often discussed, especially the conservative treatment.

There are three outstanding points in the conservative treatment of pelvic infection.

1. Avoid an abdominal section by rest treatment and vaginal drainage.

2. Conserve tube and ovary (if operated) for reproductive purposes.

3. Conserve as much ovarian tissue as possible for its internal secretion.

A large percentage of cases are cured by the rest treatment. This is shown by a questionnaire sent to three hundred cases of pelvic infection who were handled at the Charity Hospital. One hundred and three of these answered, giving the following results:

		Cured or improved	Slightly improved	Not improved	Died
Operated	48	33	10	5	1
Not operated	55	39	9	7	2

Three of the non-operative cases have become pregnant. To secure the best results, the rest treatment must be properly carried out. The patient should stay absolutely in bed during the the febrile stage and then two or three weeks after the temperature is normal; nourishing food, ice bags to abdomen and hot douches when indicated will hasten recovery.

The post abortal and post partal infections should be given a much longer period of rest than the neisserian. They should be confined to bed after the temperature is normal for at least two or three weeks. The patient should then live an inactive life for a period of months, spending as much time in bed as is practical. It is also important that there be sexual rest. At the end of this time if there are many subjective symptoms as well as menstrual disorders, an abdominal section must be considered. Those cases where an abdominal section is necessary, have gained much by the rest treatment. It not only lowers mortality, but makes a conservative operation possible.

As indicated above, the neisserian infection responds more readily to rest treatment. Before considering an abdominal section in this type, the temperature should be normal for two weeks, there should not be a rise in temperature after a vaginal examination and the total leucocyte count must be normal.

The mortality of the neisserian infection is much lower than the post abortal and post partal infections. The record of the Charity Hospital for 1922 is as follows:

Neisserian	.75%
Post partal and post abortal	7.5%
Undetermined	3.75%

These figures should be lower in private practice where a more intelligent class is handled, and where a long rest treatment is practical.

Pelvic infection is often complicated

*Read Before the Louisiana State Medical Society, January 24-26, 1924.

by pelvic abscess, this is especially true of the post abortal and post partal types. During 1921 and 1922 there were thirty-eight posterior colpotomies done at Charity Hospital; twenty-three of these were post abortal, three neisserian and twelve undetermined. There were five deaths, three of which had septicemia when they came to the hospital. It was necessary to perform an abdominal section on five, prior to their dismissal from the hospital. The remaining twenty-eight cases were not followed up, but no doubt some were forced to return for subsequent treatment.

Dr. Wharton reports 25 per cent of pelvic abscess cases are permanently cured by vaginal drainage; 23 per cent are improved permanently, and 57 per cent resulted in ultimate failure, in that the patients are not permanently relieved of their symptoms. Personally I consider Dr. Wharton's figures are conservative.

A posterior colpotomy is a simple operation, but not always well done. This accounts for the difference in opinion as to its curative value.

The patient should be prepared as for other vaginal operations. A general anaesthetic should be given, patient placed in the lithotomy position, scrubbed with soap and water followed by alcohol and draped with sterile sheets. Place a weighted speculum into the vagina, then with a tenaculum pull the cervix forward and upward. Insert a long aspirating needle through the vaginal mucosa in the mid line close to the cervix. If pus is located leave the needle in place, incise the mucosa and insert a uterine dressing forcep, using the needle as a guide. Much of the pus can be evacuated in this manner, but the mucosal incision should be well dilated with two fingers, then pass the fingers into the cul-de-sac and search for other pus pockets. After the abscess is opened and well dilated insert two or three iodoform packs into the cul-de-sac for twenty-four to thirty-six hours. The vaginal opening should be dilated every forty-eight hours either with uterine dress forceps or the fingers until the abscess stops draining. Do not irrigate the pus pocket. Now the case should be handled like any other case of pelvic infection. I consider the exploration of the pelvis with the fingers the most important step of the operation.

2. Long rest treatment before an abdominal section will do more to make it possible to conserve the tubes and ovaries than any one thing. The amount of ovarian tissue and the tubes conserved is almost in ratio to the number of days the patient rests in bed. When the abdomen is opened it is important that the tubes be handled with care, avoiding traumatising them with instruments. The tubes should be examined to determine whether they are open, this can be accomplished by inflating them with air, or catheterization. I will not discuss the plastic operations recommended for obstructed tubes. We should do more plastic work on the ovaries instead of removing the organs. This can only be done to an advantage by using small needles and fine suture materials, being careful not to disturb its blood supply any more than necessary. Before operating on a case of Neisserian Salpingitis, even after a long rest, an attempt should be made to eradicate the focus of infection special attention being given to bartholin, Skene and endocervical glands. The husband as another source of infection should also be examined and treated if necessary. The failure to remove the focus of infection is responsible for many of our recurrent attacks of salpingitis. A small percentage will be forced to return for further surgery in spite of all precautionary measures. The course pursued necessarily depends somewhat upon the patient; her age, her desire to reproduce and whether or not she is of the laboring class.

3. Often the tubes are badly diseased and for reasons already stated it is necessary to remove them. In doing this it is essential that the blood supply of the ovary is not disturbed any more than is necessary as the function of the organ depends upon its blood supply. This can be accomplished by cutting the meso-salpinx close to the tubes and ligating the vessels separately. The importance of this has been brought home to me after opening a number of abdomens for a second operation and find-

ing a small sclerotic mass instead of the functioning ovary.

The ovarian branch of the uterine is frequently ligated in performing a supra vaginal hystorectomy. An attempt should always be made to conserve this vessel, which can be done by clamping close to the uterine wall thus avoiding the vessel. Even if both tubes are removed conserve the uterus if possible; we must not forget the psychology of menstruation.

My plea first and last is for long rest treatment and more colpotomies which will reduce the number of abdominal sections and make it possible to conserve more tubes and ovaries.

DISCUSSION.

Dr. Lucien A. LeDoux (New Orleans): The subject of pelvic infection is one of equal interest to the specialist and to the general practitioner. It is a big subject. We have heard from time to time the mention of the word "rest" in the treatment of pelvic infection, but in spite of all that has been said of the value of rest, we still see cases that if they had had proper rest the ultimate results would have been better.

What do we mean by rest treatment? By rest treatment I do not mean simply ordering the patient home and to bed. That patient should be put to bed and on her back, not allowed to sit up in bed or sit over the edge of the bed; she should have ice bags and hot douches, particular care being taken to have the douche bag at the proper level; she should also have mild laxatives and a nourishing diet. This patient should remain in bed and on her back for as long a time as is found necessary. I remember a case at the hospital a few years ago where, after seven weeks of observation, we found the patient every four or five days running a temperature of 99 to 100, and on close questioning of the internes we found that the nurse had every few days been giving the patient a "good" douche, placing her on the roller and taking her to the treatment room to do this. This evidently was sufficient to cause her temperature and to prolong her treatment in bed. The rest treatment is usually as important as the operation itself, because the results of your operation depend upon the amount and type of rest that your patient has received.

The success of your treatment depends on several things—first the absence of temperature, as Dr. Sellers has brought out, absence of temperature for two or three weeks; normal leucocyte count, and no pain on examination. I have seen cases that were free from temperature, had a normal leucocyte count, but on examination they still suffered pain. These three things form an index as to the patient's condition for operation. Rest makes the operation easier for the surgeon, it allows maximum conservatism at operation, and very often it postpones or entirely eliminates the need for operation.

As regards the cul-de-sac drainage, this is important, and as Dr. Sellers mentioned, is not done sufficiently. There is some danger in doing it in cases in which it is not indicated, for instance where we have infection of the perimetrium—there little would be gained. The patient whose general condition is poor, who has been carrying infection for many weeks, who is probably in danger of passing out,—too much trauma would be dangerous. It may not endanger her life, but will make subsekuent operations more tedious and difficult.

As regards the use of iodoform packs, we have been using a large rubber tube for drainage with the pack around it. We allow it to remain in position four or five days, and after removal we have found a sufficiently patulous opening to allow free drainage.

Dr. P. B. Salatich (New Orleans) I think the most scientific part of gynecology is conservatism. It is all right to talk about conservatism, but there are two points you must adhere to if you are going to get results. First, we all agree that long rest is important, and if you want to be conservative three weeks of a febril condition is not sufficient. I remember a woman who was anxious to have a baby, but she had first a miscarriage, and then an extra-uterine pregnancy, which become infected. I kept her in bed for four months—two months after the temperature subsided. On opening her up I found the right side entirely destroyed, and on the left side a hydrosalpinx containing four ounces of fluid, and the ovary the size of an apple. I clamped off part of the tube that contained water—split the tube and took out three-fourths of the ovary, and kept the woman in bed a long time ,and she is now the mother of two children.

A second matter of importance is careful dissection. If you want conservatism you must operate carefully, more so than if you do a radical operation. Never put an instrument on a structure that is to remain. Try to do as little traumatism as possible, because if you catch any part you will have a raw surface and some adhesions. After the patient is operated on, continued use of the ice bag and having the patient elevated as hight as she will stand, is important.

Another point that is important, after you have done all this work many times the uterus sags down to the bottom of the pelvis, and if you catch it up with a suture of catgut it will pull it up and prevent a certain amount of adhesion.

Another thing, it is important to give these patients careful instructions afterwards. Tell them to keep up the douche for a long period of time, tell them to rest a good deal, to be careful about their diet and not eat anything that will cause gas, and make them keep their bowels open, if you want results.

You get better results by resecting the ovary and making a careful suturing, if possible covering the raw surface along the line of the cut. If you have to remove both ovaries and the uterus remains, be sure to save a piece of that ovary. I have had sev-

eral cases in which I placed a piece of ovary to the side of the incision, between the skin and the fascia, for the reason that if the ovary become infected it would be easily removed. You will find a large percentage of patients will not suffer from the disagreeable menopause symptoms, and will continue to menstruate after the operation.

Dr. Paul Michinard (New Orleans): This question of conservatism in pelvic infection is a very broad one, and I will limit my remarks to the Fallopian tubes. Some of the men who follow us in the wards and amphitheatre have a misconception of the behavior of diseases of the Fallopion tubes. They draw a parallel between the Fallopian tubes and the appendix. Bear this in mind—the appendix vermiformis is subject to gangrene, it rarely has an exudate protecting the surrounding tissue; while in the Fallopian tubes, owing to very wonderful circulation, we never have gangrenous degeneration. They are always protected by exudate. Now if that Fallapian tube is protected by an exudate, can you tell whether you are dealing with the perisalpinx or the endosalpinx? We have repeatedly removed tubes from the exudate and found them not badly diseased at all. Those cases of perisalpinx will get well under conservative treatment, irrespective of the quantity of exudate around them.

Another thing, I believe that every case of salpingitis will eventually become well symptomatically if taken in time. We see these at the hospital, the laboring class who have been working, with diseased tubes. We do not meet that class of people in private work. If we could take these people in the hospital, have them remain in bed for two months, we would get better results. But the great trouble in the hospital, we are thinking of the $1.50 a day it costs, and are filling up our beds. I have been fighting for a long time in my classes to try to save the Fallopian tubes. You remove diseased tubes filled in exudate, and if you follow those cases you will find that a majority are suffering just as much after operation as before. Have you saved a life? As a rule that Fallopian tube would not have killed her. If I had my way in treating salpingitis I would keep the woman in bed for three consecutive months, and I believe if we did that we would not have recourse to so many surgical procedures.

Dr. M. J. Gelpi (New Orleans): I want to mention a word in connection with conservation of the tubes, particularly with regard to the possibility of pregnancy occurring after certain type of salpingitis. We are occasionally confronted with the problem of the young married woman who is anxious to have a child, who is operated upon, and at the time of operation presents two hydrosalpinx, though occasionally there may be but a single one. The question arises as to whether it is possible to leave in such a hydrosalpinx and give the woman a chance to become pregnant. Just as we have two distinct types of pelvic abscess, so we have two distinct types of hydrosalpinx. One is the result of intra tubal infection, shows lymphoid and plasma cell infiltration extending deeply in the walls, and if you try conservative treatment on such a hydrosalpinx, you court failure as a rule and your patient will not become pregnant. This type should be removed. If, on the other hand, you have the type that occurs following extra-tubal infection, as after appendicitis, where after sealing of the fimbriated end, the hydrostatic pressure in the tube gradually stretches it into a thin wall, showing nothing abnormal microscopically—in that case the tube can be conserved. You can open that tube, if the woman is anxious to become pregnant, and by a plastic operation you may still have a very good chance of pregnancy occurring. I think that is a nice little pathological point, because occasionally you do find cases where pregnancy is longed for, and in the type of hydrosalpinx where you have a thin wall as described, resection is justifiable, and pregnancy sometimes supervenes.

Dr. P. Graffagnino (Nw Orleans): There is one point I want to emphasize. Experience has taught the gynecologist no longer to consider acute salpingitis a surgical disease; it is a medical disease, pure and simple, and surgery is only indicated for the complications that follow—accumulations of pus, adhesions, uterine displacement, etc. Yet, despite the reiterated assertions voiced by authorities to this effect and innumerable publications from their pen on conservative treatment, an astonishingly large number of cases of acute salpingitis are subjected to operation without adequate conservative treatment, with a resultant high mortality, as proved by hospital records.

Dr. J. L. Adams (Monroe): Since this paper is heard principally by practitioners and men of lesser surgical experience, I want to call attention to one important point. We are all urging conservatism to-day, but it is very easy for the pendulum to swing from one extreme to the other. I had a case a few days back that illustrates very forcibly what I am trying to bring out. This patient was brought to the hospital, wrapped in ice and given the usual course of treatment, and we thought a little pain was necessary. She was treated for two weeks and allowed to return home, apparently well of the infection, Neisserian in type. But there was a constant dull pain going on. One afternoon it became necessary to rush the patient to the sanitorium and operate. What did we find? We found the appendix had been engaged with the right tube and had undergone gangrenous degeneration. Do not be too sure of what is going to happen under conservative treatment. It is largely a medical rather than a surgical condition in the beginning, but be sure to watch for the dull pain that may follow.

Dr. H. W. Kostmayer (New Orleans): As old as the subject is, I cannot keep still when the rest treatment is talked about, because without it we could not do much in gynecology. I think it is well to emphasize the necessity for conservatism in surgery, but a great many of us do not do surgery and yet we continue to treat gynecological cases. I want to emphasize what Dr. LeDoux said, and that is the correctness of rest treatment.

We go into the ward at the hospital and tell the internes who make the rounds with you that this is a case for rest treatment, that she needs a long rest, and she may not need anything further, but whether she does or not, she needs a long preliminary rest before surgery is done. Go in a few days and look at the patient's chart, the temperature is still the same as before, she still complains of pain, and when you ask what the rest treatment consists of you will find she is being made to go with the nurse to the dressing room to receive a douche, or she is being made by the nurse to go to the toilet—the nurse will not bring her a bedpan. Not because she does not want to take care of the patient but the nurse thinks it is all right for her to get up. I think if the man doing no surgery in gynecology would learn how to give the rest treatment, he would have a big asset. The patient who takes the rest treatment from me must agree that she is not to be propped up to eat; she must not get up to the toilet or to bathe; she is given a douche, by a skilful attendant if possible, or by somebody who will administer the douche after she has been told how to give it. The douche must be hanging just high enough so the contents will flow. Invaribly it is suspended at the extreme length of the tube. It saves time, of course, to give a douche that way, but it does not do any good. What is in the douche does not count so long as it is hot. What you want is heat in contact with the abdominal vault. Use iodine, or salt, or anything, as long as it is hot, that is all that is necessary.

When rest treatment is properly applied the results are valuable, both as preparatory for surgery and frequently curative.

Dr. C. P. Gray (Monroe): Just two points on this subject that I wish to call to your attention. First, this is one of the most important subjects that will be under discussion at this or any other meeting, because of the fact that it always has been of great interest and will be as long as we continue to practice medicine.

The next point is, Why, conservative treatment, why all this rest in bed? Why conservative surgery? We are all agreed that conservatism and rest is the treatment par excellence. Let us for a moment consider why it is the treatment. It is because of the fact that this condition is found in the young unmarried female and in the married woman in her child-bearing period. These are sufficient reasons as to why we should give it serious consideration. The woman's future welfare depends upon the treatment she gets during the first few weeks or the first few days of this condition. If we could only look back and follow the trail to the end—the trail that has been made by reckless surgery, the blighted and wrecked lives of women scattered along the trail, due to the radical surgery which has been performed, the desexing of women with all of its consequent complications, we surely would be more conservative in our treatment.

Dr. T. B. Sellers (Closing): I wish to thank Dr. LeDoux and Dr. Kostmayer for emphasizing the rest treatment, as time would not permit me to go into details.

I agree with Dr. Michinard, that the longer the rest the better the result.

I want to thank Dr. Gelpi for the point that he brought out. It is one I had not considered, but I think it is worth while.

Dr. Adams mentioned a fact that we must not forget. Practically 50 per cent of the pelvic infections have complicating appendicitis, the appendix is bound down in the mass of adhesions and becomes acutely or subacutely involved. So in cases that do not respond to the rest treatment, and in the absence of a mass in the cul-de-sac, the appendix must be considered as a causative factor.

HEARTBURN; ITS CAUSES AND TREATMENT. A PRELIMINARY REPORT.*

By A. L. Levin, M.D.,
New Orleans.

Introduction.—Heartburn is not a disease, but a symptom, even as such, I trust, a free discussion of it will be of value to the practitioner; for as Leftwich wisely expresses himself, "The first thing a doctor sees when called to a patient is not a disease, but a symptom." The physician, when in a difficulty and endeavoring to make a diagnosis, is asking himself the question, "To what disease or condition may this symptom point?" Heartburn is quite a frequent symptom and every practitioner knows how to correct it, but unfortunately, only temporarily. Why? There is an old philosophical expression, "Everything in nature needs a grain of luck." If this also applies to medical science, heartburn is certainly out of luck, for the writer of medical textbooks have failed in their obligations to dwell on this most common, and at times most distressing symptom, indicating the existence of a deranged function somewhere in the digestive apparatus.

Definition.—Heartburn is defined as a burning sensation in the esophagus and pharynx, due to acidity of the stomach. In medical parlance, the terms, pyrosis; Fr. fer chaud, cremason; Ger. sod brennen, Gr. pyr., fire

*Read Before the Orleans Parish Medical Society, December 10, 1923.

and cardialgia; Fr. cardialgie; Ger. magenweh, are used. The originator of this expression, however, be he a layman or a medical man, certainly furnished a misfit link in the chain of gastric symptoms, for it does not furnish a correct understanding pertaining to the organ affected.

Literature.—There are no references in the literature, American or foreign, for a period of 14 years under the heading "Heartburn." It is referred to simply as a symptom complex associated with other conditions. Most of the standard recent medical publications do not mention a word about heartburn. Osler mentions only the terms, cardialgia and pyrosis, in describing the symptoms of acute gastritis. Sir James Mackenzie, in a recent publication, states "that it is due to sour or acid stomach contents, regurgitating into the esophagus, or in patients having a history of acute gastritis; it is also likely due sometimes to gall stone colic."

Green states that the peculiar pain in the stomach known as heartburn is most common in functional disturbances of the stomach.

Hutchinson, Shenen and Coleman claim that heartburn is frequently a reflex phenomenon occurring in the pregnant state.

Forcheimer and Billings describe heartburn as a reflex neurosis of gastro-intestinal origin.

Allbutt and Rolleston state, "In dyspepsia, the presence of food in the stomach, instead of being unfelt as in health, gives rise to a sense of epigastrial oppression or even pain. The pain may be diffused; it is very often situated at the junction of the esophagus with the stomach opposite the end of the sternum, when it is known as heartburn." Again they state "in acute catarrh, and in chronic irritative conditions of the stomach, there is pain in the pit of the stomach, as already described under dyspepsia,—e. g. heartburn.

R. C. Kemp describes pyrosis or heartburn as consisting in the ejection of chyme from the stomach into the esophagus with which is associated a burning sensation in the epigastrium. As a symptom, it most frequently occurs with hyperchlorrhydoia, also with chronic gastritis, and has been found with achylia and other gastric conditions. It may occur as a neurosis, especially among the hysteric or neurasthenic, with normal gastric contents and is of a mixed type both motor and sensory."

A. L. Benedict, without entering into the complexities of a discussion of the management of the very varied conditions upon which pyrosis may depend, suggests remedies to maintain or restore the normal downward alimentary current. In his opinion, then, the phenomenon occurs as a result of a reverse peristalsis which develops from various causes. He also maintains that pyrosis depends upon acidity, hydrochloric or fermentative acids, which might be present in the stomach.

J. Katz discusses the causes of heartburn and gastric hyperacidity from a gastroenterologic standpoint and lays stress on the fact that in all cases the cause must be ascertained, removed or treated. He enumerates the following causes:

(1) All neurological conditions and severe types of mental disturbances.
(2) Disturbances of vision.
(3) Nasal obstructions and mouth breathing.
(4) Defective teeth.
(5) Hypothyroidism.
(6) Cardiac disturbances.
(7) Toxemias of any kind, especially those following influenza.
(8) Disturbances of the gastro-enteric system, as ulcers, gastritis, appendicitis, colitis, enteritis, and their combinations.
(9) Gall bladder disturbances.
(10) Various nephritic disturbances and diabetes mellitus.
(11) Pelvic disturbances in the female.
(12) Sexual disturbances and perversions.
(13) Pregnancy.
(14) The quantity, quality and kind of food. Heavy meat eaters and those who indulge in highly spiced or seasoned food and sweets will eventually have hyperacidity.
(15) Drugs, as phenacetin, salicylates and acetanilid.
(16) Night work or keeping late hours.
(17) Great indulgence in tea, coffee

or alcoholic stimulants; we may also add the excessive use of tobacco.

(18) Eating of yeast.

(19) Excitement of any kind.

Underlying pathology: It is a remarkable fact that nowhere do we find a description of a definite understanding of the underlying pathology, except for a few scattered remarks that there is a disturbed gastric secretion, that a reverse peristalsis exists and that hyperesthesia is present. From these facts, it can be construed that we are dealing with a possible derangement of the nervous and glandular elements.

Personal Views.—The above brief and incomplete review does not furnish satisfactory explanations of the following facts, namely:

1. If heartburn is chiefly dependent on acidity, why do patients with normal acidity, subacidity and even achylia, suffer from it? In my experience, this is the most common group of patients afflicted with heartburn.

2. Why is it that a large number of hyperchlorrhydria patients do not suffer from it?

3. The fact that marked hyperesthesia is met with in achylia proves that some other factor is involved in the process.

4. If acid and hypheresthesia are the combined factors, why do we often fail to obtain relief with alkalies and sedatives.

5. We often see cases of chronic severe heartburn after appendectomy and cholecystectomy, in whom ulcer has been excluded and attention was paid to removal of foci of infection. Where lies the secret of this phenomenon?

6. It is a common statement made by patients, "I always get heartburn after eating fried greasy food or sweets." Gastric analysis reveals a normal secretion. Why do these articles of food call forth, in that class of patients, pyrosis?

With the advent in the last few years of nonsurgical biliary drainage, the study of the biliary tract has occupied a prominent place in modern medicine. My attention has been focused on this field of work and I must confess that almost every case with a suspicious biliary infection presents the symptom of heartburn. I therefore, concluded to make a few interesting observations. With the duodenal tube in the stomach, I injected a quantity of a dilute HCL (.2 to .5) into the stomach. No discomfort was produced. I pulled the tube out and reached the cardia and into the esophagus where I placed the dilute acid solution; a slight sour taste was produced, but no heartburn. I then allowed the tube to enter the duodenum and when the biliary drainage started, I obtained a quantity of bile, pulled the tube into the stomach, and reinjected the bile. Almost in every instance, the typical heartburn was produced temporarily. I have also noted that a large number of cases of chronic biliary infections present definite evidence of an existing reverse peristalsis. In fact, every case with duodenal stasis and regurgitation suffers from pyrosis, in spite of the fact that a subacidity, or approaching normal exists. This led me to conclude that a toxic biliary agent is being absorbed in the blood and following in the path of a reverse current produces that hyperesthesia, gastric esophageal, pharyngeal and even lingual, commonly designated as heartburn. In the early stage of the infection, the toxic agent, biliary or otherwise, may produce an irritative hyperchlorrhydria, but later on, if not relieved it causes a downward secretory disturbance; as a reverse current is probably produced by it, these two factors cause nerve irritation along the reverse path, causing hyperesthesia. This is evidently accomplished, not from contact irritation alone, but also through an hematogenous route, the toxic substance being absorbed into the blood. If this be true, then any toxic condition in the body, blood dyscrasias, dietary imprudence, or a neuropathic state which can cause a derangement in the function of the liver, gall bladder and ducts, will eventually produce heartburn. I would recommend the use of a substitute term, "toxic hyperesthesia" (gastric, esophageal, pharyngeal, as the case might be,) in preference to the term cardialgia or pyrosis; and suggest a classification into the following groups:

1. Transient.
2. Periodic.
3. Persistent.

Transient—when due to temporary biliary stasis, which can easily be relieved by a purgative.

Periodic—when the biliary stasis is the result of a periodic catarrhal inflammatory reaction.

Persistent—when the chronic inflammatory reactions brought about tissue changes through the entire biliary tract, including the liver, the relief in such cases is difficult, and even the surgeon is not the master of the situation.

Treatment: The treatment of the underlying biliary toxemia is in my opinion the most rational way of handling the situation, and not the attempt to change the acidity by mere alkalies, as is commonly practised. Heartburn is nature's warning of a derangement in the biliary apparatus as much as pain is the automatic signal in the human machine. Even in the transient type, steps should be taken to prevent a reoccurrence of a biliary stasis. The golden rules which have been lately adapted in the treatment of gall bladder disease should be equally applied when heartburn is the signal. What are those golden rules?

1. Eradicate the source of the starting point of the trouble wherever and whatever it might be, infection, error in diet, faulty mode of living, overwork, sedentary life, worry, and anything which tends to exhaust or produce a short in the human battery.
2. Give a chance to the biliary apparatus to recuperate.
3. Improve the drainage of bile.
4. Endeavor to keep the bile in a liquified state.
5. Correct an existing reverse current.
6. Prevent, if possible, the absorption of toxic biliary products by taking proper measures early.

All of these can be accomplished in the following manner;

a. Diet—small and frequent meals, avoiding fried foods, excess of fats and sweets and highly seasoned foods.

b. Plenty of water, 8 to 10 glasses per day.

c. Alkalinized fluids, such as Vichy, 3 or 4 times per day.

d. The bulk of the diet must be vegetables and fruit.

e. Plenty of exercise.

f. Sedatives and protective agents for relief.

g. Periodic exposure of liver and gastric areas to thermo light and probably X-ray.

h. Correct constipation and prevent intestinal stasis.

i. Impress the patient with the importance of intelligent co-operation.

The most successful sedatives in my hands are calcined magnesia, sodium bicarbonate and extract belladonna; olive oil, mineral oil and pure vaseline as protectives. Of great importance, is the employment of gastric lavage, every day at first, later on, on alternating days. As the primary aim is to get rid of a toxin, it must be continued for a long time in order to obtain any positive or permanent results. Nonsurgical drainage of the gall tract, in the severer types, plus a transduodenal lavage, is an excellent procedure to restore the normal downward alimentary current. According to Benedict, the stipulation of the salivary secretions by chewing gum, slippery elm or a piece of candy, will check reverse esophageal peristalsis; anodynes should be resorted to for pylorospasm and strychnine should be employed if there is a marked atony of any part of the alimentary canal.

A few words in regard to the use of thermo light and X-ray exposure. Three of my cases of a very stubborn type of pyrosis with pain in the gall bladder area have been materially relieved of their distress by the use of the thermo light, twice or thrice daily, over the gall bladder area, for a period of twenty minutes, in addition to other measures outlined. The German writers have recently advocated the use of X-ray for the reduction of hyperacidity. The impression in some quarters is that it does not aid the healing of gastric or duodenal ulcers, that it does not reduce acidity, and consequently it does not relieve the pain. Will it be of any value in pyrosis? This would be an interesting observation for the radiologist.

SUMMARY.

1 Heartburn does not primarily depend upon acidity.

2. My observations tend to strengthen my belief that a toxic agent,

biliary or otherwise, is the primary causative factor.

3. The irritation primarily is probably hematogenous, producing an hyperesthesia.

4. A reverse current carries the sensation upwards.

5. Toxic hyperesthesia (gastric, esophageal, pharyngeal, buccal, lingual), is a better term than pyrosis or cardialgia.

1222 Maison Blanche Bldg.

BIBLIOGRAPHY.

1. Osler & McCrae (Vol. III, page 228).
2. Green: Medical Diagnosis. (Page 102).
3. Hutchinson, Shenen & Coleman: An index of treatment. (Page 788).
4. Allbutt & Rolleston: System of Medicine. (Vol. III, Pages 354 & 417).
5. Forcheimer & Billings: (Vol. III).
6. Kemp, R. C. Diseases of the stomach, intestines and pancreas.
7. Benedict, A. L. Pyrosis. (Ref. Handbook of the Med. Sciences, 7: 432, 1917.
8. Katz, J. Etiology and treatment and gastric typeracidity. Med. Rec. N. Y. 1921 C, 591.

DISCUSSION.

Doctor Daniel N. Silverman. Heart burn, as the Doctor stated, is to be regarded as a symptom of reflex origin, due to disturbance of the nervous system as a result of pathology within the stomach or elsewhere. The hyperesthetic conditions of the gastricmucous membrane is productive of numerous other symptoms, underlying cause of which must be sought for. Relative to the part played by the gastric secretion in inducing a burning sensation. it is interesting to learn from the physiologists, Carlson and later Bel, that perfectly normal individuals may have equally high acidities as have been found in any cases of gastric disturbance. Rehfuss's report of a series of two thousand analyses has shown that either reduced or absent acidities were the only findings of clinical significance. I do not think that regurgitation of duodenal contents, either normal or pathological, into the stomach has any bearing on the symptom, heart burn. In my studies of normal individuals I have found that the stomach contained regurgitated bile in fifty per cent. Individuals, having had cholecystectomy performed. have a constant regurgitation of infected bile into their stomach; however, very few of such cases will complain of pyrosis; in fact. many become entirely free of symptoms and some are cured following the operation.

Primary disease of the gall-bladder and liver, occasionally of the pancreas. and quite often of the appendix, are some of the causes that are found in the digestive tract producing the various gastric symptoms. Extrinsic causes are found in diseases of the chest organs. urinary and vascular system.

Dr. Hilliard E. Miller. I wish to comment on Dr. Levin's paper only as it relates to pregnant women. Heartburn, and even the condition of hyperemesis gravidarum, appears to me, in the majority of cases, to be due to pylorospasm, which is usually promptly relieved by the administration of sedatives. A few months ago it was suggested in one o the journals of obstetrics that luminol of sod was very efficacious in this condition, and believe two successful cases were reported I have followed this suggestion, giving th drug in two grain doses before each mea and I have promptly relieved several cases o the ordinary vomiting of pregnancy, as we as one or two that approached a conditio of hyperemesis.

Dr. E. Denégre Martin. I am sure if a orthopedist were here he would add one mor symptom: flat feet.

The doctor spoke of the pancreas as on of the causes—I recall two cases of cance of the pancreas that suffered from this co dition.

I too suffer from heartburn, for some tim I have a simple remedy, soda crackers. Onl last night it took four soda crackers to que the storm. There may be patients who ca not submit to lavage and it would be well fo them to know a simple and efficient means relief.

Dr. A. L. Levin. (Closing): Dr. Si verman's remark that we often find bi in the stomachs of individuals who ha no symtoms of heartburn cannot be consi ered as evidence to refute my theory. H probably misunderstood the contention in m paper. When I said biliary toxemia is th principle cause of heartburn I meant infec ed bile, not normal bile. Of course norm bile does not contain that particular tox which pathologic bile does, and that parti ular toxin in pathologic bile is the cause the disturbance, hence we may have norm bile in the stomach without any symptom Infected bile in the stomach is a patholog condition.

As far as Pancreatic and Appendicial di eases are concerned, it is possible that th are the contributory factors in the bilia infection, or they might be the primary agen so that it is quite common to find heartbu in chronic biliary toxemias plus Pancrea diseases and Appendicial involvement. R cent investigations of the relationship of Pa creatic diseases to diseases of the liver a gall bladder prove that a very large numb of cases show involvement of both Pancre and biliary tract.

My main contention is that the heartburn not caused by an acid radicle, but by a to circulated in the blood originating in t biliary tract.

Dr. Simon contends that the presence absence of mucous plays an important p in protecting the mucous membrane from ritation.

Personally I cannot agree with Dr. Sim in this respect. It is a well known fact t in chronic gastritis we have an excess mucous. The mucous membrane of the st ach should then be well protected; yet th are the principal cases where heartb plays a very important part. In most my cases I have observed a condition of ch nic gastritis with a marked subacidity bord ing almost on achylia, and heartburn the principal disturbing element, for re of which they sought medical aid.

Dr. Martin's remarks can be answered in a simple way. I stated plainly that intelligent co-operation is an important factor in obtaining good results in cases of heartburn, and I am sorry to say that in this respect he is the ideal doctor who usually makes the worst patient.

The most important point, and the one which I want to stress in my paper generally is that the teaching, as we find it in textbooks, that hyperacidity is the main factor in heartburn is unquestionably misleading. In most of my cases I have definitely observed chronic biliary toxemias associated with pyrosis, and I am convinced that a closer study of that most interesting and heretofore unexplained distressing symptom in gastro-intestinal diseases will bear out my conviction as stated in my paper.

SENSITIZATION OF BREAST FED INFANTS TO FOOD PROTEINS IN MOTHER'S MILK, WITH REPORT OF CASES.*

BY LUDO VON MEYSENBUG, M.D.,
NEW ORLEANS.

Instructor in Pediatrics, Tulane University of Louisiana; Associate in Pediatrics, Touro Infirmary.

Perhaps the most puzzling problem that has presented itself to the pediatrist in the past has been that of persistent colic, diarrhea or skin eruptions in an otherwise normal breast fed baby. For generations past our forefathers believed that the diet of the nursing mother might affect the infant through her milk, but we have discarded that belief as a superstition chiefly because we were not able to prove it to be true.

To be sure, mother's milk has not escaped investigation when such symptoms existed in the infant, but analysis was usually considered negative because a normal fat, sugar or protein content had been found; and, we blush now to admit it, many an infant has been deprived of the protection of it's mother's milk simply because the colic did not yield to the ordinary household remedies or mayhap even to the more stringent measures adopted by the physician in charge.

High fat content has for a long time held the center of interest and forms the basis of Czerny's "exudative diathesis"; and true it is that in some instances a reduction of the fat resulted in an improvement in clinical symptoms. However, that the fat alone was responsible soon came to be recognized as a fallacy and other investigations were undertaken.

Some years ago Talbot[1] reported several cases of eczema in children and gave us our earliest indications that protein sensitization forms the tap root of the disease. Speaking of the similarity between certain forms of eczema and urticaria he says: "—the earliest lesions to appear are so similar to certain forms of urticaria that it is often impossible to distinguish between the two. As time goes on the urticarial-like eruption becomes a typical eczema. This sequence of events can be produced experimentally or accidentally by giving too much egg to an individual who has an idiosyncrasy to hen's egg. There is little doubt in my mind that this form of eczema is usually a late stage of urticaria." Again: "More recently it has been possible to differentiate the various types of the disease (eczema) by the skin tests with foreign proteins." The work of Schloss had given the impetus to investigation along this line.

That the eczema of nursing infants might belong to the same group of sensitization phenomena had entirely escaped attention. How close many investigators came to the truth has been brought home to me by personal experience. When I was an interne on Dr. Talbot's service, we performed many routine skin tests with food allegens. So often did we obtain positive reactions in young infants to foods, particularly egg albumin, which we knew the infant had never eaten, that we abandoned the tests as worthless and charged the positive reactions to faulty technique. Little did we suspect that we had actually put our finger on the key to a very important discovery.

It remained for Shannon[2], two years ago, to make this discovery and to prove beyond peradventure of a doubt that food proteins are excreted as foreign proteins in breast milk. So interesting is Shannon's work that it warrants giving you a few details.

He sensitized guinea-pigs to egg white by subcutaneous injection with this solution. Twelve days later these sensitized pigs, together with control pigs were injected intraperitoneally

*Read Before the Orleans Parish Medical Society, December 10, 1923.

and intrathecally with breast milk from a mother whose infant had eczema and who itself gave a positive skin test for egg albumin. The sensitized pigs immediately exhibited the symptoms of severe anaphylactic shock, those injected intrathecally dying within a few hours, while the controls remained free of any symptoms. Further and similar experiments performed with breast milk from mothers whose infants presented colic or diarrhea, or both, gave similar results. Conversely, breast milk from mothers who had eaten no eggs failed to cause anaphylaxis when injected into egg-sensitized guinea pigs.

Shannon has since extended his work and proven that other proteins besides egg albumin may pass into the mother's milk and cause symptoms in the infant. As corroborative evidence of this allergy theory of eczema we find in the differential blood count an increase in the eosinophiles, often as high as 20%; furthermore, skin tests with food proteins will within a few minutes demonstrate the specific protein to which the individual is sensitized. Removal of such protein from the diet of the nursing mother will quickly result in relief from symptoms.

The technique of skin tests in infants merits a brief description. The back is washed with soap and water and thoroughly dried. Alcohol may be used, but is not necessary. A number of small cuts, about one-eighth inch long, are made with a sharp scalpel, but are not deep enough to draw blood, although they do pentrate the skin. On each cut is placed a protein and to it is added a drop of 0.1 normal sodium hydroxide solution to dissolve the protein and to permit of its rapid absorptions. At the end of 15 minutes the proteins are washed off and the reactions are noted, always comparing the inoculated cuts with normal controls on which no protein was placed. The interpretation of the positive reaction has been the subject of considerable discussion among workers in this field. Walker (3) requires an urticarial wheal one-half cm. in diameter for possitive interpretation. In infants, however, this standard is not suitable. A definite erythema, in the absence of a similar reaction in the control, should be regarded as positive and the lesser reactions should be kept in mind. This is the standard by which Shannon (4) interprets his reactions.

As the food proteins are quite expensive and a large number of them must be used if one hopes to find the offending one, I have adopted another procedure which is admittedly not as scientific and accurate and which does not give the answer within a few minutes as does the skin test. This procedure consists in having the mother keep a record of all food that she eats for a period of several days to a week, no change being made in her diet. A study of such a record will usually show a predominent taste for one article of food. This food can then be eliminated from her diet. It might be argued that the element of chance plays the leading role in one's choice of the food to be interdicted, but my experience has shown me that the method is practical. The chief objection to it is that during those days of recording, the infant continues to be fussy or to have colic or diarrhea and if this takes the form of nocturnal serenading, the parents are apt to become discouraged. However, a little explaining usually clears up this feature. Of course one must be prepared to perform the skin tests, using all food proteins that occur in the mother's diet, if the above procedure does not prove successful.

I will now give you the report of four cases recently coming under my observation. The first case is that of a baby girl first seen when 1 month old. She was three weeks premature, delivered with forceps and was the first pregnancy. The birth weight was not recorded, but at four weeks she weighed 9 lbs. 6 oz. General physical examination was negative, as was the blood Wassermann. The bowels were normal and no skin eruption was noted at this time. The baby nursed one breast two hours and received no other food. She was lost sight of until 6 months of age when she returned with the story that the bowels had been loose for several weeks, numbering 5—6 a day and that there had been a skin eruption for 3 months, which had resisted all attempts on the part of the mother to clear it and a calomine lotion given by a physician had likewise not been of any benefit.

The bowels at this time numbered 3 to 4 a day, there was no colic or excessive crying. The physical examination was negative save for a severe, moist and scaling eczema, covering the entire face and extending on to the neck. The baby was still exclusively breast fed. The mother's diet was investigated and it was ascertained that she ate 3 to 4 eggs a day, two for breakfast, one for lunch and food cooked with eggs for dinner. I told her to exclude eggs and food cooked with eggs from her diet and to apply nothing to the eczema. This she did and returned in 10 days. The skin at that time was entirely clear and the baby was having one or two normal stools a day. The mother then recalled a period about 3 months before when she herself had been sick and had eaten nothing but toast, milk and tea for one week, during which time the baby's eczema had cleared up without treatment, only to return shortly after the mother resumed her usual diet.

Case two, a colored baby first seen in the outpatient department of Touro Infirmary when one month old, was full term, normal delivery, normal at birth, birth weight not recorded. Breast fed to date, no other food given. The complaint was a skin eruption since one week of age, no symptoms accompanying it. Examination of the baby shows normal palms and soles, but large areas of desquamation over the trunk, neck and face, with some crusts. The weight was 8 lbs. 2 oz. Blood Wassermann on baby and mother were both negative. The baby was being nursed irregularly. No treatment was prescribed other than regulation of the nursing interval to every two hours at one breast. When next seen, two months later, the eczema was still present and there was a good deal of colic and some spitting up after nursing. The bowels were regular, one or two a day. A luetin test at this time was negative.

It was learned that the mother ate 3 eggs for breakfast and food cooked with eggs at the other meals. She was instructed to omit all eggs from her diet, but to make no other changes. No medication was prescribed. In two weeks she returned and the baby's skin was entirely clear having begun to improve 2 to 3 days after the mother had withheld eggs from her diet. There was no more colic and no fussiness. There was some evidence of rickets.

The third case is the boy baby of a physician, seen first when 2 weeks old. The complaint was loose bowels and colic, crying and fussing almost all the time, especially at night.

He was full term, forceps delivered, weighing 6 1-2 lbs. at birth and was being breast fed regularly every three hours. There is abundant milk, the breasts leaking between nursings. For several days the bowels have been very loose, the stools numbering 10 to 12 a day, green, watery, with small fat curds and some mucus, but no blood. He spits up if disturbed after nursing.

Physical examination shows a small, icteric baby with depressed fontanels and overlapping sutures. There is no evidence of rickets and the viscera are negative; no glandular enlargement. Analysis of the mother's milk shows 4 per cent cream and calcium 32 mgs. per 100 cc, which is normal. No treatment prescribed except instruction as to proper method of nursing in order to obviate swallowing of air, nursing too fast, etc. One week later there was still a good deal of colic and crying, but the bowels were not loose. Weight before and after nursing showed that the baby got 3 oz. from one breast. The mother was then asked to keep a record of her food at all meals for one week, but to make no changes in her diet. Examination of the record showed that she ate oatmeal every morning for breakfast and lots of it. She was therefore instructed to omit oatmeal. This she did and four days later the baby began to improve. One week later it had no colic and slept all night without crying. During the day he was happy and playful and cried only occasionally before a feeding was due. He had gained one pound in two weeks since the mother's diet had been regulated. After a time the mother broke over the traces and had to satisfy her craving for oatmeal. This was followed within a few hours by a return of symptoms in the baby, colic, diarrhea and crying. The mother knew the remedy and after that obeyed instructions very carefully. The baby has had no trouble for the past eight months.

The fourth case is a female baby three and one-half months old, full

term, normal delivery, normal at birth, breast fed irregularly to date no other food being given. Past history is negative for any infectious diseases. Present illness dates from the time the baby was three weeks of age, since when there has been a rash on the face and neck. No history of desquamation of palms and soles. The bowels became loose about one week before the baby was brought to the office, the stools numbering 5 to 6 a day, green, watery with white flakes in them. There has been no fever, sleep is normal and the appetite is good.

The mother, questioned as to her diet, admits eating eggs at every meal, totalling 4 to 5 eggs a day.

Physical examination of the baby was negative save for a diffuse papular eczema of the face and neck, with a few papules over the back. The stool showed nothing remarkable. No medication was prescribed, but the mother was forbdden the use of eggs in any form. Five days later she returned with the baby and the eczema had entirely disappeared and the bowels were normal.

These cases need no comment, but they are interesting because they show that no matter what measures one might adopt, short of weaning, no relief from symptoms need be expected unless the offending food be eliminated from the mother's diet. As previously stated, if we cannot pick out the food responsible for the trouble, we must be prepared to perform the skin tests, using all foods that occur in the mother's diet.

The evidence at hand leaves little doubt but that when we encounter obstinate cases of colic, diarrhea with curdy stools, excessive crying and fussiness or eczema in a breast fed baby that is otherwise healthy and gaining normally in weigth, we are dealing with sensitization to some article of food that the mother is eating. This fact readily explains an observation that has long been well recognized, namely, that one infant will thrive on breast milk that another cannot tolerate. We often hear the expression: "I had to wean my baby because my milk was poisoning him"—and such weaning is, also, all too often occasioned at the advice of the attending physician. A little study of such cases would prevent many a feeding disaster.

Therefore it is contended that all cases of eczema, colic, diarrhea, or excessive crying in otherwise normal nursing infants, that do not promptly yield to the recognized simple methods of treatment, must be studied for determination of sensitivity in the infant to all of the foods contained in the mother's diet. Unless the physician has accomplished this, he must be considered as having failed to do his whole duty to the patient.

REFERENCES

(1) Talbot, F. B., Medical Clinics of North America, vol. 1, no. 4, January, 1918.
(2) Shannon, W. Ray, American Journal of Diseases of Children, /LII, 223. September, 1921.
(3) Walker, I. C., Oxford Medicine, vol. 2, p. 121, 1920.
(4) Shannon, W. Ray, Minnesota Medicine, March, 1922.

DISCUSSION

Dr. I. I. Lemann: I can only say pretty much what Dr. Simon has said. On the whole, the sensitization test in my hands has been disappointing. I have been doing them some four (4) years and I have seen very few successful results. Recently, on a trip to Boston, I saw the test being worked out at the Massachusetts General Hospital by Dr. Rackmann. He was able to show us a group of cases of asthma due to orris face powder the ladies use. There were quite a few cases and the most satisfactory cases of positive reaction I have seen.

Dr. Von Meysenbug (closing): I have not had any experience with intradermal tests with foods proteins, but have had with the tuberculin test. It is a rather difficult thing to do, especially with a large number of tests. It requires precision and careful technique to get within the skin. A baby's skin is tender and it cannot always be done satisfactorily, where scratching can be done pretty well without a delicate technique. I am not surprised to hear Dr. Simon and Dr. Lemann say that tests were unsatisfactory because frequently in babies we do not get any results at all. In such cases we simply have to be guided by what might be causing the trouble. In most cases we have found eggs the offending food. It is simple to interdict eggs in mothers' food.

In regard to the way the eggs are cooked, it does not make any difference. Albumin may be excreted in mother's milk and if the baby becomes sensitized to it, trouble ensues. I have also used the group extracts that Dr. Simon spoke of and much time and unnecessary labor is thereby saved.

MERCUROSAL IN SYPHILIS.

BY CHAS. E. VERDIER, M.D.,
NEW ORLEANS.

Syphilographers generally are agreed that mercury is still the sheet anchor in the treatment of syphilis.

In order of acknowledged efficiency the various preparations of mercury are divided as follows according to the desired method of administration, beginning with the time-honored pills, then inunctions, intramuscular injections and finally the most refined method, the intravenous administration.

The use of mercury by vapor baths has been practically obsolete for some time.

Whether mercury should be given as an interval injection with one of the arsenicals (Arsphenamines) or whether a course of the former should succeed the latter is a moot question, for experience teaches us that he who is a routinist in the treatment of Syphilis is doomed to disappointment.

For intramuscular injection we have a choice of the soluble or insoluble salts of mercury, both of which are open to the objection of pain following administration, the insoluble salts being the lesser offenders.

For intravenous injection. we have had the objection advanced that veins were sclerosed and that infant administration was prohibited.

Within the past year the writer has had occasion to use Mercurosal, a synthetic organic compound of mercury containing approximately 44 per cent of mercury and having a very low toxic index, the formula being di-sodium-hydroxy-mercuri-salicyl-oxy-acetate.

This preparation has been used with uniformly good results and the following cases are taken from my records as exhibiting the efficacy of this remedy in the different types of Lues reported.

Case 1. White female, examined September, 1920, no history of primary lesion, a few macular spots on forehead and various parts of body, very discreet in appearance; reflexes normal no subjective symptoms, her hair dresser first called her attention to the "spots." Blood Wassermann four plus, refused spinal puncture and was very irregular in attendance for treatment.

Received during 1920 five injections of neoarsphenamine, dose 0.9 grammes each, during 1921 received one course of intraumuscular injections of mercury Salicylate averaging one and one half grains each and numbering in all, twelve injections and during the latter part of that year received four injections of neoarsphenamine dose 0.9 grammes each. Wassermann in December, 1921, was two plus with a four plus Tchernugobow. Early in 1922 this patient received twelve intravenous injections of mercurosal dose 0.1 gramme in 5 cc. of distilled water at three-day intervals, one month after taking course the Wassermann was negative, six months later the Wassermann was still negative, with no objective symptoms.

Case 2. Early Lues; white male, age 23, macular rash over entire body, general adenopathy, history of sore six weeks previous, Wassermann four plus positive.

Treatment consisted of neoarsphenamine 0.8 gramme doses combined with mercurosal 0.1 gramme, the arsenic being given once weekly and the mercury twice weekly for a period of five weeks at the end of which period the Wassermann was negative and the case symptom free.

Two months later the Wassermann was negative and three injections of arsenic with six of mercurosal as above outlined were administered.

Two months later the Wassermann was negative and two injections of arsenic and four of mercurosal were given, following this course the patient was tonsillectomised.

Two months later this patient presented a negative Wassermann and was symptom free.

Case 3. Acute lues, white male 28, chancre, dark field and India ink positive for Spirochetae Pallida, inguinal adenitis, bilateral, duration of sore, one week.

Treatment—Eight injections of neoarsphenamine 0.9 gramme doses at weekly intervals combined with mercu-

rosal twice weekly in 0.1 grammes doses. Wassermann one week after treatment was concluded, negative and six months later Wassermann remained negative.

Case 4. Late lues. Meningeal type, white male 36 married, all sorts of treatment during last twelve years at irregular periods. Persistent vertico-occipital headache, knee reflexes absent, slight Romberg, negative blood Wassermann, spinal fluid shows a strong leutic curve with colloidal gold set, increased cell count and globulin, positive Wassermann, no increase of pressure.

Treatment—Ten injections of neoarsphenamine 0.9 gramme doses at weekly intervals combined with twenty intravenous injections of mercurosal 0.1 gramme doses administered twice weekly.

During the sixth week of the course the spine was again tapped at which time there was an increase of pressure, but a decrease of all other previous findings. One week following conclusion, of course, the spine was again tapped with the following findings, cells normal, slight increase of globulin, weekly positive Wasserman to 1 c. c., slight elevation of gold curve in the 5th, dilution all subjective symptoms improved. This case is again under treatment after a rest period of six weeks and has received six intravenous injections of mercurosal in 0.1 gramme doses at six-day intervals combined with sodium iodide intravenously in 30-grain doses every three days; all symptoms of headache have disappeared and the man is at work and comfortable.

Mercurosal seems to be non-toxic in the dosage as cited, no reactions have been observed, beyond some transitory redness of the gum margins. There has been no occlusion or irritation of the veins noticed following injection.

In practically all of the cases mentioned the same vein, the median basilic of the left arm has supported the entire series of treatments.

It would appear that in this new preparation, we have a form of mercury which is well worth adding to our anti-syphilitic remedies.

TUMORS OF BONE*

By F. W. Parham, M.D., F.A.C.S.,
New Orleans.

Of late years much attention has been given the subject of tumors of bone, largely due to the enthusiastic devotion to their study of such men as Bloodgood, Ewing, Coley and others.

Bloodgood has been for thirty years persistently studying and periodically giving the profession the results of his painstaking investigations. He has brought to this study not only the skill of the trained surgical pathologist, but has utilized the remarkably developed resources of the Roentgeon ray.

Ewing, one of the foremost pathologists of the present day has made an intensive study not only by means of pathologic sections but also with the X-Ray in diagnosis and treatment of bone tumors and Coley in the face of much discouragement and ridicule has persisted in his work with an enthusiasm and determination rarely witnessed.

Bloodgood's observations are based upon a personal study of 270 cases made pathologically and by means of the X-Ray. His articles published from time to time in the Journal of Radiology, Annals of Surgery and elsewhere merit the most careful study by surgeons, pathologists and roentgenologists.

Coley reports the end-results of a series of 251 cases of sarcoma of the long bones observed from 1890 to 1919.

Ewing, whose book on Neoplastic Disease is a remarkable contribution, which may be consulted with confidence, has recently given us a most valuable discussion of bone tumors in the Archives of Surgery. These works must be carefully studied by all who desire to acquire a comprehensive knowledge of the subject. Yet the whole subject is still in more or less confusion, due largely to the fact that no agreement has been reached by pathologists and surgeons as to a proper nomenclature of bone disease.

The American College of Surgeons is now lending its organized effort to clear up this confusion and put the nomenclature of bone tumors on a rational basis. To this end it has appointed a Registrar, who has established a registry for

*Read Before the Louisiana State Medical Society, April 24-26, 1923.

bone tumors. In this work Dr. Bloodgood, of Baltimore, and Dr. Ewing, of New York, are heartily co-operating. This registry is endeavoring to get the history, necessary clinical data, X-Ray examination, and a specimen of the tumor or slides secured by operation or at autopsy, in every case of bone sarcoma, or supposed sarcoma. The data and specimens, with X-Ray plates, thus secured are sent on to Dr. Codman in Boston. He examines the evidence and sends it on to Dr. Bloodgood and Dr. Ewing, who return their findings to Dr. Codman. The case with all data is then registered and filed in suitable envelopes. A copy of the evidence with opinions and any advice desired is forwarded to the surgeon sending the case report and all other cases in the registry will be mailed to him if desired. Surgery, Gynecology and Obstetrics will publish from time to time statements from the registry, so as to keep the profession abreast with the work.

In a letter recently received by me from Dr. Codman he says: "The present status of the registry is this. We have registered 268 cases of supposed-sarcoma and I am at present abstracting and analyzing these cases for publication in Surgery, Gynecology and Obstetrics. The data of each, consisting of history, X-Rays and microscopic slides are filed in Manila envelopes 10x12 inches. Each case has been submitted to as many pathologists as possible who are willing to review the case and state their opinions on its malignancy and on the name under which it should be classified. The need of uniformity in nomenclature is very apparent for the variety of names which one case can accumulate is strikingly shown. In order to crystallize the nomenclature so that it may be more intelligible in different laboratories I have drawn up a diagram found on a printed sheet enclosed. One of these sheets is enclosed in each envelope so that any pathologist or surgeon can write his opinion of any given case on the sheet." With proper co-operation on the part of the surgeons and pathologists in this country you can easily see what may be done in establishing a rational basis for diagnosis and the management of these cases. You can easily see the advisability of such an intensive and systematic study of this unsatisfactorily cultivated domain of surgery. Greenough, Simmons and Harmer, for instance, in their review of the bone sarcoma cases for a ten year period from two up-to-date clinics, namely, the Massachusetts General and the Huntington Hospital, found 148 listed as bone-sarcoma but on restudy only 66 could be classed as primary malignant new growths of bony origin, the remaining 82 proving to be metastatic tumors (29), sarcoma of bone secondary to sarcoma of the soft parts (28), inflammatory conditions, (11), and non-sarcomatous type, (14 cases). "It is not surprising, therefore," writes Codman, "that the percentage of error in isolated clinics is even greater." In fact, most of the supposed-to-be sarcoma is not sarcoma at all.

For years many cases of bone sarcoma submitted to amputation have subsequently died of metastasis to lungs, because their real nature was not sufficiently early recognized; on the other hand, many benign tumor cases have been subjected to amputation when conservative treatment would have sufficed.

In spite of the fact that in 1824 Sir Benjamin Brody had the foresight to examine the amputated leg of a young woman and found an abscess in the tibia which it was apparent could easily have been cured without the sacrifice of the limb, surgeons have been slow in learning that destructive surgery is to be avoided where less radical procedure would save limb as well as life. So consistently and successfully did Sir William Ferguson strive to do this that he is justly entitled to be called the father of conservative surgery.

In bone surgery this conservatism was especially tardy in manifesting itself, due to the failure of surgeons to grasp the distinction between benign and malignant tumors. This notwithstanding the observations of some forward-looking men of the last century. Ewing notes that as early as 1852 Nelaton and Robin in a well illustratel monograph, clearly pointed out the gross, microscopic and clinical features of the (benign) giant-cell tumor, contrasted it with malignant osteogenic sarcoma and urged conservative treatment. Gross also, he says, in 1868, clearly described

the disease and recognized its benign nature. Thompson, of Galveston, has recently called attention to the very clear description of benign tumors of bones given by Sir James Paget in his lectures on Surgical Pathology in 1854, stating "that they are not apt to recur after complete removal and have not in general any features of malignant disease."

Strangely, such definite teachings were overlooked and the benign tumor became included with the malignant and suffered the same mutilation! In order to change this order of things there must be collaboration between the surgeon, pathologist and roentgenologist as now proposed in the scheme elaborated by Dr. Codman for the American College of Surgeons.

As stated by Ewing, embryology, physiology and pathology of bone, and the study of abundance of clinical material are the most fruitful sources of progress in the future. Clinical study by the surgeon and morphological research by the pathologist must be broadly and systematically planned. The surgeon must provide complete clinical pictures of the different neoplastic diseases of bone, and the pathologist must discover the origin, predisposing anatomic conditions, mode of growth and general etiologic factors. Finally a means of dissemination of this knowledge must be found. The usefulness of such a co-ordinating body as that forming the Registry of Bone Sarcoma becomes at once apparent.

Much of the trouble arises from the variants of the typical tumor. The typical giant-cell tumor, recognized as benign and recovering under conservative treatment would not often in competent hands give rise to difficulty, whereas in another case, apparently benign, metastasis finally closes the scene. An interesting case in point is that of LeConte's reported by Bloodgood. He and other pathologists pronounced it non-malignant and urged conservative treatment. Extentive recurrences in the femur necesitated later a hip-joint amputation. Death finally occurred from hemorrhage from iliac vessels involved in metastasis.

All the energies of the profession must be directed towards improving our means of diagnosis, so that we may early distinguish the innocent from the malignant tumor of bone.

It would not be possible in the time alloted to a paper of this kind to go into anything like an adequate discussion of the diagnostic means at our disposal. I shall, therefore, only cursorily refer to some of the salient features of the subject.

First I will lay down the now self-evident proposition that some tumors of bone are benign and some malignant. It is also clear from the evidence furnished by Coley, Bloodgood, Ewing and others, that even some malignant disease of bone is amenable to conservative treatment. We are gradually learning to distinguish these.

The remarkable improvements in the technical features of X-Ray apparatus are enabling the skilled X-Ray worker to evolve interpretations from his flouoroscopic and film examinations that are truly astonishing. The clinical history and the roentgenological data are giving us a wonderful insight into hitherto little understood pathologic conditions. Finally, the exploratory incision for direct observation of the tumor and the obtaining of a piece of tissue for miscroscopic study, now countenanced and advised by the surgical pathologist, is a most valuable expedient for checking the other data and preventing our adopting a wrong procedure.

Bloodgood in his monograph on The Diagnosis and Treatment of Benign and Malignant Tumors of Bone goes into the matter very thoroughly. The harmless roentgenologic examination is enabling us to get very early information regarding changes in bone. To this end he recommends repeated examinations at intervals of affected bones. In this way the earliest possible information is obtainable. The age of onset, duration of symptoms, symptoms of onset, such as pain, pathological fracture, swelling, disturbance of function, history of fracture and history of trauma all have distinct significance and often permit of a satisfactory diagnosis.

Bloodgood lays great stress upon examination of any bone subjected to trauma the moment there is any complaint by the individual. If this were done many cases would be recognized early and successfully handled; failure

to do so gives us frequently the information too late, after metastasis is already on its way. For example, only seven of twenty-three of his cases of central sarcoma were operated on within six months of the first symptom. He thinks "this observation gives hope that if these central sarcomas are recognized and treated within a few days or weeks after the onset of the first symptom the probabilitities of a cure will be greatly increased." As emphasizing the advisability of repeated examinations at intervals he mentions the case of a surgeon who sprained his ankle July, 1916.. X-Ray examinations were made at intervals until August 10 when the lesion was found in the outer condyle of the femur and operation done September 9. Other instances in point are cited. In summing up his experience of twenty-seven years with bone tumors Bloodgood remarks: "At the present time the diagnosis of a bone lesion, especially in its early stage, in the great majority of cases must be made at the exploratory incision and in making this incision the surgeon should be prepared to prevent the dissemination of tumor tissue, especially of myxoma, into the exposed normal tissues. This is most important when the lesion can be removed by local resection rather than by amputation." Myxoma, usually considered benign, is prone to metastasize and in this respect must be considered malignant, although easily extirpated locally.

"The number of cures in periosteal and central sarcomas are too few to estimate the danger of exploratory incision without such destruction." He remarks that "the present results of periosteal and central sarcoma do not offer much." He does not feel prepared to discuss the results of X-Ray, radium and toxins, but "can find no evidence that these agents have any effect upon the lung metastasis and this is the cause of death." The chances of recovery even after amputation are small, being only four per cent. The only chance seems to be furnished by early diagnosis. When his paper was written we know nothing about deep X-Ray therapy. Recent reports extend the hope that this high voltage machine may materially add to our therapeutic armamentarium, even in metastasis to the lung. Ewing, who has had much experience in the use of radium and X-Ray in the Memorial Hospital in New York thinks the goal to be aimed at is the non-operative treatment. "The main exceptions to this proposal, of which there are many, are found among the early osteogenic sarcomas with which prompt amputation has effected some cures." He thinks the therapeutic test decisive as between certain classes of bone tumors. "Myxomas and diffuse endotheliomas melt down rapidly under roentgen ray and radium," and they control the growth of benign central tumors.

When the clinical data, roentgen ray findings and therapeutic tests have been carefully weighed by an experienced observer," he believes "there will be few cases remaining for exploratory incision." From his experience at the Memorial Hospital he has become a strong advocate of the physical agents. He refers to the case of Jüngling reported cured by the roentgen ray—a large medullary sarcoma of the upper end of the femur. Jüngling records also the spontaneous regression of two other cases located in the humerus and fibula. Ashhurst in a paper read before the American College of Surgeons expresses the view that Coley's toxins should be used in all cases of bone sarcoma.

In conclusion I would say that with early diagnosis and the prompt employment of the roentgen-ray, Coley's toxins and radium most of the benign cases may be cured and many malignant ones greatly benefited if not cured. Operation should be conservative where promising, but amputation should not be delayed longer than necessary for the thorough therapeutic tests.

The X-Ray, properly applied as a therapeutic test, will often render valuable aid in clearing up a diagnosis. I would especially stress the fact that bone sarcomas treated in the most radical manner generally die, not from recurrence, but from metastasis to the lungs. Bloodgood had been able to find in 1920 four cases, two of central and two of periosteal, sarcoma, that survived over five years, the others dying from metastasis to the lungs, some as early as a few months, some as late as two years and more. But in all these

cases the metastasis was already on its way at the time of the amputation. The only hope is early discovery of the disease in the bone. This can only be done by prompt X-Ray examination whenever there is a history of injury followed by complaint localized in a particular spot. Not only one examination, but repeated examinations must be done until there is complete cessation of trouble. I have already mentioned an instance in point. But the surgeon's formula should be: early diagnosis and successful treatment go together.

DISCUSSION.

Dr. E. D. Fenner (New Orleans): I cannot add anything to the beautiful presentation made by Dr. Parham indicating the lines on which we may assist in getting information in regard to sarcoma, but I want to record a unique instance of sarcoma in a child whose history record I have unfortunately not been able to furnish to the sarcoma committee. This case was unique because it was a case of a little girl about eight years of age who was brought to the hospital in her early childhood, when about two years old, presenting a very remarkable case of partial gigantism involving the whole lower extremity, not only the soft parts, but the left labia majora. After a few years she received a blow on this hypertrophied limb from which there developed a tumor. She presented herself and I made an exploratory incision and got a piece of the tumor, and got back a report that it was osteo sarcoma. Then the problem arose as to how we should treat it. I finally determined to do an amputation of the limb, removing the lower end of the femoral condyles, for this reaosn—that provided she in the future should be fortunate to become one of the four living sarcomas five years after operation, and was able to wear an artificial limb, that by amputating through the condyles I would arrest in part the growth of the femur so as to prevent the gigantism from reasserting itself in the upper portion of the limb. Since the operation, from which she recovered without any particular difficulty, I have never been able to get in touch with the patient to find out whether recurrence took place or not. But the instance of sarcoma upon so unique a case as partial gigantism involving the whole lower extremity seems to me quite unusual.

Dr. Rudolph Matas (New Orleans): I regret that I did not hear the paper, although I know more or less the ideas the paper presented. I can only say that the subject is most opportune for the surgeon and for the general practitioner, who has the greatest responsibility in these cases. I am speaking of course, of primary bone tumors in general, and particularly of primary sarcoma, because carcinomas are always secondary to growth elsewhere.

I am sure Dr. Parham has covered the subject thoroughly, but I would like to mention the practical question of the attitude of the practitioner and practical surgeon in dealing with the problem. He deals with tumors of the bone as the primary growth. What is he to do, I think that rests essentially upon a few points. The first thing when we see a patient with tumor of the bone is to determine what kind of a tumor it is. We are not now dealing with the sweeping rule that primary tumor means amputation. The question is rather that of conservatism—whether conservatism can be applied or not. That question hinges on another point—the nature of the growth and how early we find it. We have now histologically quite decided evidence to show that a large number of tumors which in the past condemned the patient to amputation, can now be treated by simple exclusion of the exudate and allowing the bone to remain without mutilation of the limb. We have other growths in which we must interfere, and even when we do interfere we know they are absolutely fatal from the start. This group is of two types—the small round-cell sarcoma, and the slow-growing, giant cell tumor, myeloid in type, which is essentially benign. The surgeon ought to be conservative, he ought not to amputate if it is the benign type, but if he has a round-cell tumor, even if he operates he knows the results will probably be fatal anyway. It is the greatest kind of a problem. In fact, the question comes to us whether it is worth while to do anything with the small round-cell sarcomas at all. Judging by the late work of Blood-good it is not worth while to do anything in the way of radical operation because the patients almost invariably die of metastasis to the lung. Scarcely 4 per cent. have survived five years after amputation.

It does not look as if it were possible to accomplish anything therefore beyond mutilation. I think however, we are going too far on that side, and I am thoroughly of the opinion that if we can make a diagnosis early enough, as we should be able to do if the patient complains early, we can accomplish much by conservative treatment. Of course there is no amputation to be done without careful section by a pathologist. The responsibility of the pathologist is enormous—a great weight is thrown on him, and also a great burden on the Roentgenologist, for we depend on these men in the early stages to furnish us the indications for action.

I think in a general way that the thing that really counts in the biological diagnosis is the size of the cells. The tumor which shows proliferation, giant cells of the myeloid type, should be treated conservatively. A central tumor can be treated in a conservative fashion provided the bone has not been so destroyed that it is impossible to preserve it after extirpation of the tumor; but if a large portion of the bone has been destroyed, amputation is better. The old rule that the nearer the cells approach the adult type the more benign, holds true in bone tumors. The smaller the cells the more danger of malignant disease.

I wish I could relate instances to you from my own experience which would illustrate this disease. We have three things in mind—the small cell tumor, malignant; the large

cell tumor, benign; and the mixed type in between. There is a domain here in which we have benign and malignant elements and in which we should give the patient the benefit of the doubt. Where there is a mixed type of cell, large and small, on the border line, we should amputate. I certainly would advise that plan and would follow it myself.

I think Dr. Parham gave you the views accepted today by the best authorities.

Dr. O. C. Cassegrain (New Orleans): I would like to speak especially of the matter of taking more than one X-Ray picture, and also with reference to the incision.

I have in mind a case I saw last winter, a man who came with tumor of the femur. His thigh was very much enlarged, and the first X-Ray picture came back with the diagnosis of sarcoma of the femur. The picture did not impress our chief as sarcoma, and we had another picture made, which cast still more doubt on the diagnosis. So we had the third picture made, and after going over the three pictures there was some doubt in our minds as to whether it was sarcoma or not. An exploratory incision was made, and it revealed a ossifying hematoma seven inches long and three inches wide, shaped like the head of a spear. The hematoma was removed, and the patient made an uneventful recovery. If we had accepted the first report from the X-Ray man we would probably have amputated the man's limb.

Dr. J. A. Danna (New Orleans): II would like to hear more general discussion of this subject because I believe it is one that the surgeon has to deal with often. In listening to Dr. Parham's paper and to Dr. Matas' remarks the picture of the surgeon face to face with a case of this kind struck me very forcibly. You can compile statistics showing the results in certain conditions, but the determination on the operating table as to what kind of case you are dealing with and just what to do for it is not always a very easy thing.

My experience with amputation for sarcoma of the extremities has been that every case I have known of has died. The more recent advances in the treatment of these cases with the help of Coley's toxins, radium and the X-Ray, make one feel that the handling of these cases is comparatively safe. I am always in fear and trembling in the presence of possible malignancy whenever I think of making an incision into that tumor, even though I know I am immediately going to remove the tumor, because incision into the tumor for the purpose of getting a section means the possibility of sending some of the cells into the circulation and the early probability of metastasis somewhere. I would like to lay emphasis on the fact that with the help of radium, and especially the X-Ray and Coley's toxins, sarcoma of bone and of the extremities, sarcoma generally, is not as fatal as it used to be in the past. We are now curing many of these cases. I only hope that deep X-Ray therapy will develop to the point where some day we will be able to give the patient deep X-Ray treatment before the operation and make our field safe for incising these tumors for the purpose of getting sections without the probability of starting immediate metastasis.

Dr. C. H. Mosely (Monroe): There is just one point that I have been guided by in making up my mind as to the condition that exists. I have never seen a sarcoma that followed a fracture. In the war and since I do not believe I have seen a case where the continuity of the bone was destroyed, where the tumefaction that followed was a sarcomatous condition. It has generally been some other condition that we have to deal with, a tuberculous condition that gives us all the X-Ray findings and the clinical symptomatology that would make us think of sarcoma. A man gets up at night in a hurry and bumps his chin on a chair. To my mind that is a more potentially sarcomatous blow than would be a gunshot or a fracture.

Dr. F. W. Parham (closing): I only want to emphasize one point that was brought out, and that is the necessity of finding out the nature of these tumors as early as possible in the history of their development, and the only way to do that is by means of the X-Ray. When a patient suffers trauma of the bone and continues to complain as a result of that trauma, we should make an examination of that bone at once, and if necessary of other bones in the immediate vicinity, and not only that, but the examination should be repeated at intervals. In the case I related, and which I think is a good illustration, the surgeon sprained his ankle, but it was only by repeated examination from time to time that it was found that the trouble was in the internal malleolus. It was operated and relieved. It certainly was a potential sarcoma, and it was his only chance. In view of the fact that Bloodgood in 1920 stated that only four cases of osteogenic sarcoma are living five years after operation—in view of that fact, and the fact that we know they die, not from recurrence in the bone, but from metastatis to the lung, I think it is important for us to forestall such a termination by finding out at the earliest possible moment by means of the X-Ray what the nature of the tumor is, and let our treatment be determined accordingly. By considering the age of the patient, the onset of the trouble and the various features connected with it, we can gain a very considerable amount of clinical information regarding the case; but the X-Ray is of prime reliance, and with the present perfection of X-Ray apparatus I think it is the duty of the surgeon to employ it early and as frequently as may be necessary in order to make early diagnosis.

THE DRUG SCOPOLAMIN*

BY E. HOUSE, M.D.,
FERRIS, TEX.

One is forced with reluctance to accept, as indisputably true the statement, that it is embarrassing to a physician to present personally any research work, or to discuss his achievements.

*Read Before the Orleans Parish Medical Society.

Such a delicate task is never undertaken without casting a seeming shadow of egotism and conceit. I would have you feel, my desire was to respect modesty and to refrain from self praise.

It is questionable, if there can be found in the United States pharmacopoea a drug entitled to more respect and appreciation. I shall not discuss the treatment of addicts except to say in that field scopolamin stands alone.

For local anesthesia like tonsillectomy, it is used to eliminate, every phase of mental excitement. In this work Scop gr 1-50 is given two houre before the operation.

When scopolamin grain 1-130th is combined with morphin grain 1-4 to grain 1-2 it will ease any type of colic where morphin and atropin fail.

Shockless Surgery is now a proven requirement and for that purpose, scopolamin ranks supreme, not withstanding all that is said to the contrary. The assertion that scopolamin is more depressing to the respiration than is atropin cannot be proven by clinical tests. In clinical doses, neither drug effects the respiration.

I appreciate scopolamin anesthesia in obstetrics as another one of the mighty good things cast into the therapeutic discard. For this reason, I will only discuss my deduction and technic.

The policy of unwarranted precaution will never develop any idea, and there is nothing more fatal than not wanting to see the principles of truth. For that reason, I went to New York to observe the management of a case of obstetrics by the Gauss method. The men who demonstrated convinced me they had very little, if any, previous experience with scopolamin. I left New York disappointed.

After a digest of my observations, the idea presented itself to me; that there is always a better way to do anything. That throughout nature laws were in pairs, the law of control. If scopolamin would cause blue babies, there was some drug which would prevent scopolamin from producing blue babies, that if scopolamin did not kill the mother, it should not kill the baby, that of morphin was contra—indicated with the newly born baby, it should be contra—indicated with the unborn baby.

When I returned home my confidence was established, that the strychnin in the old Florence—Rosser addict treatment would prevent the blue baby. Good luck favored me in my first case. My record to date shows six hundred and thirty six cases of scopolamin anesthesia in obstetrics and the finger of criticism cannot be pointed to one death, due to scopolamin.

I improved with each case. I studied each detail and made improvements where I observed they were necessary. After four years of experimenting, I selected the technic I have, so far, never been influenced to change.

I rarely commence scopolamin until I suspect I can finish delivery in four hours. I give first, scopolamin grain 1-130th. In ten to twenty minutes, I inject scopolamin grain 1-200th plus apomorphia grain 1-60th. In twenty to thirty minutes absorbtion of the drug should be complete, and I then administer chloroform, selected from a careful comparison with cannabis indica, gas, and ether. I invite the patient to count after me slowly, and in a loud voice, to divert her mind, until she can no longer count. The chloroform quickly produces unconsciousness, and its use is then discontinued.

After the chloroform is removed, the patient rapidly passes from analgesia through hypalgesia into the stage called amnesia, and the manifestations of the amnesia can only be estimated from experience. I never permit the nervous phenomena of a patient, or the conversation, to influence me while she is in the throes of a labor pain, but I do note most carefully the condition of the mind in the intervals between pains. If I decide after thirty minutes that the stage of amnesia is not satisfactory, I again administer chloroform and again invite the patient to count after me. The number she reaches tells me accurately the condition of her mind. If the patient can count to forty, I give scopolamin grain 1-200th. It is difficult and slow and requires large doses of scopolamin when used alone to produce unconsciousness, but it is very easy for a small dose of scopolamin to hold the cerebrum depressed after the synap-

ses are contracted with chloroform. Clinical investigation has proven that scopolamin and chloroform act similar upon the nervous system.

The only danger to anticipate with scopolamin in obstetrics is the effect of the drug upon the baby. You cannot get away from the fact, that the baby will be as drowsy as the mother. To prevent the blue baby, inject strychnin sulphate, grain 1-80th deep into the abdominal tissues of the expectant mother five minutes before delivery is anticipated. Babies are very sensitive to the effect of strychnin. This size dose was selected only after many careful tests from grain 1-30th to grain 1-100th. The strychnin as you all know is an antidote to any drug which contracts the synapses of the dendrites of the cortical cells, hence the blue baby only needs stimulation of the pneumogastric nerve.

When the head passes over the perineum, if believed necessary, again permit a few inhallations of chloroform as every mother loves to say I do not remember when my baby was born" The baby leaves a temperature reputed to be one hundred and five degrees. At the moment of delivery, have the room warm and a hot blanket ready. If you will instantly wrap it in the hot blanket, hemostat, cut the cord, then establish regular breathing, there is no reason to anticipate any trouble with the baby so far as scopolamin is concerned. I consider scopolamin grain 1-60th the limit of safety. If that amount (where apomorphia and chloroform are used) is not sufficient for the purpose desired, I allow the patient to appreciate the extra pain. You need at times a patient's help, and when you learn to hold them on the border line, you can depend upon their assistance. I keep my baby awake for an hour and do not nurse for six hours.

It was in my obstetrical practice that I observed my patients would reply correctly to questions, and retain no memory of the query or answer they gave. I worked quietly on this idea for five years, as I respected ridicule, and when I had made three hundred tests without a failure, I deduced the idea that I could take a criminal and rob his mind against his will of the stored content called memory.

Facts should make cynicism capitulate to common sense. I wish to make the unequivocal and emphatic statement that I am not one hundred percent perfect, nor can I ever be, but the drug is one hundred percent perfect. The criminal work is to me a thousand times harder to understand than the use of scopolamin in obstetrics.

I will make no attempt to explain how my work is accomplished. I thought I knew, as I selected a plausible explanation from the latest edition of the physiology, but when men, whose life work is the study of the brain, advise me my explanation is all wrong and that they themselves cannot understand, after witnessing a demonstration, I ask to be pardoned for this apology.

Like myself, most people lack discrimination to arrive at a coherent conclusion. To illustrate: I ridiculed the mosquito theory. No man regrets the attitude I assumed more than myself. I was sincere in my belief that malaria was due to a miasma and displayed no evidence that I was a conservative man. The description of some men, outlining my technic, is antithetical to the facts.

I give first scopolamin grain 1-80th plus apomorphia grain 1-40th. In ten minutes I give scopolamin grain 1-130th then in twenty minutes I commence to test out the absorbtion of the drug and give scopolamin grain 1-200th every fifteen minutes until memory is inhibited or destroyed. Then to prevent any possibility of malingering, I chloroform to complete anesthesia which is of course beyond unconsciousness. I then await the functioning of the auditory center, and engage the individual in conversation when the tongue can correctly articulate. This condition I have named the "House's Receptive Stage". The criminal work is tedious, slow and so tiresome, as it is very difficult to make the individual understand, the import of your question. Unless a man follows a test to a conclusion, he will have ample grounds for criticism as it is sometimes necessary to present a thought in several different ways, when the memory is vague or the question is too long.

In the examination stage you observe a child-like frankness and a child-like

honesty, where the replies to questions are given without evasiveness and an openness without guile, deceit, or fraud. The idea of placing a criminal by the use of scopolamin in a state of the mind called artificial sleep, is to release facts firmly implanted in the mind, which for various reasons are closely guarded under normal conditions, thereby leaving the mind free for expression unrestrained by motives of self interest.

The interpreter cannot make the individual examined speak what is in the interpreter's mind, but he will give from his own mind, previous experiences stored there as memory, irrespective of whether he would normally wish to do so, and regardless of the thoughts and attitude of the interpreter. The most difficult argument I have had to meet is that a chronic liar cannot be made to tell the truth. The fact is, they have proven my easiest subjects, for the reason: A lie is built around the truth, and ycu cannot tell a lie, no matter how many hundred of times, without thinking at the same time of the truth. You cannot tangle up a man telling the truth because he does not have to remember what he said, but a liar does have to remember what he said. It is easier to tangle up a deeply intoxicated man than it is to enmesh a sane man in the tangle skeins of his own strings of fabrications. To illustrate such a case:

At San Quentin, two men by the names of Farrer and Carver, under life sentence for murder, volunteered for the test to prove their innocence. Carver went to sleep after the first dose of scopolamin grain 1-130 but awoke when I rolled up his sleeve for the second injection. He came off of the table and refused to continue with the test. To the committee he said "my head is swimming, I can hardly see and I scarcely know now what I am saying, if I took another dose of the medicine, I might not know what I said. He told the committee they had mislead him, that he thought he would be in his right mind and the drug would make him tell the truth anyway. When told that he owed it to science to continue the test, replied he did not owe science a blank thing.

Farrer did not wake up and continued the test. To a reply of many leading questions, the following story was selected, "Carver and I went to the chinaman's store to rob him. I was in the front part of the store at the cash register, and Carver was in the back part of the store where the chinaman was and Carver shot him twice. I put the money in my overcoat pocket. I had two forty five pistols, but I did not shoot. When I left the store, I went to the bay and dropped in my guns."

Since the Carver episode, I raised my initial dose of scopolamin from grain 1-130th to grain 1-80th. At San Quentin was another chronic liar, who desired to prove his innocence. I do not wish to infer that he was a natural born liar because he was a native son of Louisiana but to tell you that he confessed to robberies all the way from Louisiana to California, giving details of arrest and robberies, the authorities had no previous knowledge of. He was nick-named Six Bits as he had seventy-five years to serve. His one redeeming quality was, he admitted no murders, but confided in me that he shot at and missed three times a negro in New Orleans. His name was John Johnson. (Colored.)

The criminal serves no righteous purpose. His protection constitutes nothing to the public welfare, and he violates all the principles of morals, as well as inhibits the best interests of civilization. By that I mean, the criminal should be the concern of every citizen and every State should create a department of criminology and place a man in charge who has a sympathetic heart and a mind capable of intensely studying the Cause and Cure of Crime. Human destiny is made by man and not the creator.

Let me invite you to consider how very practical some so-called impractical things are. The Cardio Pneumograph Machine is an instrument which accurately measures mental repression and when once the value of the cardio pheumograph machine and the use of scopolamin, checked against one another, are firmly established in the minds of the people, there will be shown a large minority who are seething with a fine idealism for the Constitution? And WHY?. There is no provision in the Constitution for the protection of

the law violator. It is the certainty of punishment that most deters crime, as is shown in the English Courts. These two methods are, to say the least, worthy of consideration.

Were it not for the peace officer, life and property would be of little value. If that be true, then they should have every aid consistent with humaneness. The two methods above mentioned may not be infallible, but with the two methods, I do not believe a criminal could defeat the purpose of the law.

Today, the best the American public can expect for their protection is one conviction in ten trials, and five per cent of those convicted are innocent. I believe sincerely, I could take Dr. J. A. Larson, the inventor of the so-called *"Lie Detector"* and by checking our results, show a percentage, of not less than fifty percent. That would be forty percent, more than all the present day resources of our Government. The value of the two methods, in dollars and cents cannot be estimated when statistics say, one third of every dollar collected in taxes is spent for the control of crime. At Berkeley, California, scopolamin was tested against the machine by the same list of questions, that was used by Dr. Larson on the suspected murderer, Wilkins. The replies elicited, from Wilkins, showed the same as the markings on the carbon sheet. Wilkins was acquitted, the findings of the machine were not presented for legal reasons to the jury. Wilkins volunteered for the scopolamin test, that he might further satisfy those dissatisfied with the finding of the jury .

The lie is the criminal's only weapon of defense. With the lie the criminal is hard to defeat. A weapon that will win nine legal battles out of ten must be a powerful weapon. If the lie is the great problem to handle, then why not try to control it. To control it you must start with children. Their mind is like an empty bottle. It is easy with these statistics to see why the lawyer, with few exceptions, does not want anything which will make a man tell the truth. Here I will offer a statement from the lecture of Dr. Thomas. B. Simms—Head of the Department of Philosophy of Trinity University—"In spite of the fact that some of our fine men are in the practice of some phase of the law, the legal profession today has the lowest standard of ethics of any of our worthy vocations; They, as a rule, are little concerned with the humanitarian spirit."

I invite your consideration to the O'Leary Case. This was an amnesia case, selected for me at San Quentin, had I known the condition of the man I would have refused him for fear of a failure. As it resulted, it proved a blessing in disguise.

O'Leary was called the walking dead man. He is said to be one of the strangest cases of multiple personality on record. He claimed he was shell shocked in France, although he could not tell where or when. The American Legion at San Francisco then investigated his war record. It was revealed that as Sergeant Eugene O'Leary, he was lost somewhere in France and had not been seen again until he was found in a Government Hospital, after the signing of the armistice, suffering with complete loss of memory.

Under scopolamin anesthesia, he said his name was Burns and his father's name was Pierre Burns and that he was born in Luxemburg, Belgium. When the war broke out he joined the American Army under the name of Eugene O'Leary, and was made a Seargent in Company D of the sixth Artillery. He said he was wounded five times by a shell at the Battle of the Arganne. Some one spoke up and said "That's a lie" he was not wounded. I said "If you were wounded put your finger on the wouds." He pointed to five places on his hip. I investigated and found the shell scars on his hip.

This case led me to believe that under scopolamin anesthesia, a physician might by a set of test questions trail out every nerve tract, and locate the area of diseased tissue in the brain. Also he might make a diagnosis of a case of insanity as to whether it was curable or incurable.

With those ideas in contemplation, I went to Austin, Texas, to test out again this theory. Dr. Joe Wooten, one of the leading physicians of Austin and a Regent of the University of Texas, to whom my idea appealed, went with me to see Dr. Preston, Superintendent

of the Asylum. Dr. Wooten's persuasive arguments did not appeal to Dr. Preston except as an absurd proposition. I then corresponded with Psychiatrists over the Country and I am now in a position to quote what the other man has to say: Dr. P. R. Vessie, Supt. of the Gowanda State Hospital at Gowanda, New York, in a paper read at Albany, N. Y. Oct. 19th, 1923 reported four cases briefly as follows; "For three months, a man 39 years old remained in bed in a continuous stupor, with no sign of mental activity. He was quite helpless as to his personal care, but permitted himself to be spoon fed. Under scopolamin anesthesia, his delusion was found and discussed with him. The next day he spoke voluntarily, remarking that his belief was probably imaginary. Dr. Vessie says "This case shows what actually was done for a patient when his delusions, otherwise hidden in darkness, was brought to light with the help of scopolamin.

Case number two suffered also with a delusion, that chemicals were placed in his food rendering it unfit for human consumption.

Case number three, Dr. Vessie says, emphasizes the possibility of coping to advantage by means of scopalamin with patients who conceal the ideas which rule their conduct. This patient was under observation for two years and ten months, during which time no information was obtained as to his life history or his delusion. Under the medicine he related the details of his trouble and gave his life history.

Case number four—a young man sent to us from the penitentiary gave a fictitious name as was later proved. He persisted in making funny faces, whistling and laughing in a peculiar way. He defied the attendants and especially resented with a sneer any question. From November the 16th, 1922, until September 13th, 1923, he steadily maintained this secretive, obstinate, impenetrable attitude. On the latter date, he was placed in a state of scopolamin anesthesia in accordance with the method of Dr. R. E. House, the first physician to introduce this revolutionary practice in the field of criminology, as the writer is now employing it in the field of insanity. The patient admitted that he had assumed in the past, at least eighteen aliases. He then told his right name and gave his life history. A communication was sent to his mother in Ohio to the address he gave. Her reply is as follows":

"Received your letter and was glad to hear from you and that my son is in your hospital and safe, as he left home and we never heard where he was until you notified us."

Dr. Vessie closes his paper in the following words:

"The result obtained in these various cases seemed to prove quite conclusively that scopolamin, judiciously used, may be of great practical assistance to the alienist in the difficult task of penetrating the dark recesses of disordered minds.

Dr. Vessie read a paper last week in Washington entitled "Scopolamin, The Detector of Delusions."

I have reported Dr. Vessie's work as a debt of gratitude and also for what benefit it might offer to any Neurologist who might have desired to hear my paper.

In a recent letter Dr. Vessie writes he conducted a series of ten cases of catatonic praecox and found a blocking, so that replies cannot be obtained. If a psychiatrist should happen to pick as his first case a catatonic praecox, he would fail to obtain results.

The condensed conclusions from my experience in criminology are:

First—The science of criminology should have for its purpose, the protection of the innocent and the education of the guilty.

Second—Our jails are a disgrace to any Christian nation and peace officers are very considerate or very inconsiderate men.

Third—The poor man has a meager chance in a Texas courthouse, as we do not have a public defender, with the liberties of a public prosecutor.

Fourth—Witnesses are all biased. It is appalling to note the percentage of witnesses who lie intentionally or unintentionally.

Fifth—I believe in a punishment for every crime and for every murder, but the punishment should be to teach the beauty of a good action and the deformity of an evil one.

Sixth—Disease is the greatest cause of crime. If the medical profession would concern itself about the *Cause* and Cure of *Crime* with the same intensity she investigates the cause and cure of cancer, she would reduce the number two-thirds, now being sent to the penal institutions.

The legal status of my idea does not concern me. I have no desire to send any man to the penitentiary, but the innocent has invited my sincere sympathy. I can see no provision being made to care for the children criminally inclined, who will to-morrow prey on society and later to become hogs in a pen.

I would like to see in Texas a Department of Criminology similar to the State Board of Health, with a staff composed of a Minister, a Lawyer, a Teacher, a Layman and a Physician. That staff made up of three women and two men, I make that distinction for the reason, "A mother some how just knows." The potential power of America is not her iron or waterfalls, but the undeveloped character of her children.

I have refused all offers of pay, in no other way, in seeking the recognition of my Fraternity, can I prove my motive is sncere.

If scopolamn anesthesia can be proven ten per cent reliable, its use should be made legal, as a humans "Third Degree" and the administration restricted to those physicians, who can show a record of one hundred cases as assistants.

The liar I have the most contempt for, is the man who turns State evidence. I wish every one of them could be made to prove their contention under scopolamin anesthesia. Some of them I know are honest, but in my work, I have my first one to meet.

This will be my last professional paper, and I am glad I am in the city of my graduation as a physician. My financial condition will not permit me to further neglect my private practice. My patrons are offended, when sickness comes to their home and I am away. Twelve men I have assisted to be set free will always comfort me for the financial outlay, I will need in my old age.

A man may be censured by some and criticised by others, but I still believe in giving to the world the best you have and the best will come back to you.

THE USE OF THE STEM PESSARY IN SELECTED CASES OF DYSMENORRHEA AND STERILITY.*

BY HILLIARD E. MILLER, M.D., F.A.C.S.,
NEW ORLEANS.

Dysmenorrhea and sterility, either singly or associated, are perhaps as common as any conditions which the gynecologist is called upon to treat, and certainly as baffling. As yet we know practically nothing of their primary causes, which have been variously attributed to infectious diseases, bad hygiene in early life, anemias, and malfunction of the glands of internal secretion, particularly the thyroid; not a single one of these contentions, however, has yet been proved. We are most often confronted with cases in which no gross lesion exists, in which the menstrual flow is normal in character, in short, in which there is no reasonable explanation for the presence of these two conditions. The percentage of failures reported from every method of treatment is disheartening, and the variety of treatments advocated is eloquent testimony to the fact that none is uniformly successful, and that the specific remedy is yet to be found.

Men who have investigated the subjects report that dysmenorrhea and sterility are increasing everywhere, with the continued progress of civilization and the added complexities and refinements of life. Norris states that 13 per cent of all foreign and 20 per cent of native marriages in this country are sterile. Macomber places the figure at 10 per cent, with the male responsible in perhaps 50 per cent of these, and Reynolds agrees with him. Arthur Giles, quoting Simpson, gives 10.9 per cent as the figure for village communities and 16.3 per cent among the aristocracy. The percentage of sterility, therefore, ranges from 10 to 15 per cent and is increasing. As to dysmenorrhea, Norris asserts that 75 per cent of all women suffer from it in various forms, while Blair Bell in his recent report, perhaps the most exhaustive on the subject, gives an average incidence of 66.5 per cent. In the face of such figures

*Read Before the Orleans Parish Medical Society, December 10, 1923.

the importance of the subject can hardly be overestimated. Moreover, the frequent association of both conditions in the same patient not only gives an added interest but leads to the inevitable conclusion that common causes are responsible in the majority of cases, and that the same type of treatment will be equally applicable to both conditions.

It might be well at this point to clarify the subject by defining our use of the terms. By sterility we mean inability to bear children by women who have sexual relations and who have done nothing to prevent conception; a woman who becomes pregnant, even though she aborts or miscarries habitually, certainly cannot be considered sterile. A woman primarily sterile has never borne children; a woman secondarily sterile has borne children once, but can do so no longer. Under the average circumstances a marriage may be considered sterile at the end of two years; Ansell, quoted by Norris, reports that 88.1 per cent of a series of 6,035 fertile marriages culminated in pregnancy by this time. He also adds that the first child is usually born within 16 months of marriage, and the majority of investigators agree with him that if pregnancy is to occur, it will usually occur within the first year.

By dysmenorrhea we mean pain recurring regularly at each menstrual period; it is primary if it dates from the first two years of puberty, secondary if it is of later origin. It may vary from acute discomfort to actual intolerable pain. It necessarily varies, too, with the physical and nervous condition of each individual patient, and of course with individual tolerance of pain. We do not include those cases in which the dysmenorrhea occurs only occasionally, and then can be explained on the grounds of exposure, undue exertion, or concurrent illness. I think you will find that the majority of cases which seek relief for dysmenorrhea are women of fairly good general health, with no special nervous symptoms, who are partially or entirely incapacitated for a certain period of time each month.

The subject of sterility is not one that concerns either the life or the general health of women; it has to do, from a social aspect, with the welfare of the state, and from a personal aspect, with the happiness of the individual. Any procedure for its relief, therefore, is based on the desires of the patient rather than the necessity of the case. This is not true of dysmenorrhea. The severe type always, and the moderate type frequently, constantly recurring without relief, affect the general health of the patient and often lead to a train of nervous symptoms whereby a vicious circle is set up, and each succeeding period becomes harder to endure than the last, and is less promptly reacted from. Moreover, many of these cases occur in women of the professional and working classes, whose livelihood is dependent on their own efforts. From an economic standpoint they cannot afford to absent themselves from their work regularly, or even to have their output, as it were, materially lessened by their physical disability if they are not entirely incapacitated. In many cases, therefore, the relief of dysmenorrhea is an urgent problem.

I have been led to consider again the use of the stem pessary for the relief of certain selected cases of dysmenorrhea and sterility for two reasons: the radical procedures advocated by many of our leading gynecologists under these circumstances, and recent literature unreservedly condemning the stem. I admit that its present status is decidedly indefinite, ranging from unqualified approval, with too often promiscuous use in improperly selected cases, to wholesale condemnation on the ground that it is unsafe and ineffective. Both these attitudes are unfortunate, the latter, I believe, rather more so, because frequently the no-stem advocates give their approval to measures much more radical and correspondingly more dangerous. For example, one gynecologist favors dilatation with Emmett amputation of the cervix; another advises dilatation followed by laparotomy, with the facile comment that it does no harm to open the abdomen when the patient is under anesthesia anyway; and a third advocates anterior hysterotomy. And bear in mind that these very radical procedures are advised for and practised on young, unmarried women. They are questionable, it seems to me, even if they presented an unbroken series of successes. Naturally they do not, and the morbidity, and even mortality, small

though it be, that follows them, certainly cannot be defended in the cure of sterility, which, as we have already pointed out, has no relation to life and health; or in the cure of dysmenorrhea, whose relation is purely relative.

For the purposes of this paper I have reviewed 95 cases in our private practice, covering a period of 10 years, in which the stem was used to correct one or both of these conditions. During that same period probably 2,000 cases have consulted us for similar conditions, but the stem was used in only 95, not quite 5 per cent of the number. Reginald Rawls, in a recent report, gives figures only slightly higher, 1.3 per cent, in his review of the cases in a large hospital service in which the stem was considered justified. I would have you note that it is applicable only in a small number of cases, and that the primary factor of safety as well as success lies in the proper selection of the cases.

It is never applicable in the presence of any gross pelvic lesion. Salpingitis, either puerperal or gonorrheal, active or passive, is a positive contra-indication, as are urethritis, endometritis, any inflammatory condition of the cervix, ovarian changes, and a positive Wasserman. In short, in the presence of any sort of infection, demonstrated by history, physical examination or laboratory findings, or merely suspected, the stem is not safe and must not be considered. It cannot be used, naturally, in the presence of any gross pathology, which is either irreparable or demands surgery, such as the congenital absence of any portion of the genital tract, bicornate uterus, uterine or ovarian tumors, or prolapse and procidentia in secondary sterility. General contions must also be corrected, such as obesity, certain febrile and nerve conditions, and goiter. It follows, then, that the stem can be used only in cases in which no gross pathology exists. These include infantile and undeveloped uterus, pinhole os, the abnormally long and conical cervix, anteflexion, and the constricted internal os. There is frequently in such conditions an increase in the muscle or fibrous tissue about the internal os, sometimes leading to the formation of a distinct ring, which simulates a condition of hypertrophic stenosis such as we see in certain stomach conditions. It is surprising to note how often one or more of these conditions will be found in an otherwise normal pelvis, and how, in such cases, the dysmenorrhea is practically always of the type long ago characterized as "spasmodic" or "expulsive", and always indicating relief by mechanical means.

Our procedure in these cases is as follows: A detailed history is taken with particular reference to past medical diseases of the acute infectious type, as well as appendicitis; to the general health, including bowel function and nervous symptoms; and to the dysmenorrhea, including the time of the appearance and the duration of the pain, its character, and the nature of the flow. A careful general examination is then made, followed by a bimanual pelvic examination, except in the case of young girls, when the examination is made by rectum. In no case is the pelvic examination omitted. Infection is ruled out by the physical findings and careful laboratory examination. The husband is then questioned as to his past history, and is examined by a competent genito-urinary specialist. A woman is never subjected to any operative procedure of any sort for the relief of sterility until her husband has been pronounced virile. General conditions such as obesity, constipation, etc., are corrected. Then and not until then dilatation with the use of the stem is advised.

We have found that any period of the month except during the actual flow is equally satisfactory for the procedure. We use the routine pre-operative preparation of oil and enemata, and the parts are clipped. Shaving is not necessary. We prefer gas oxygen anesthesia, which gives satisfactory relaxation and eliminates the unpleasant after-effects of ether, and the strictest asepsis is observed throughout. The patient, when fully relaxed, is put in the lithotomy position, and the parts are thoroughly cleansed with green soap and alcohol. A Sims speculum is inserted, the cervix grasped with a vulsellum, and dilatation done with the Goodell or Hegar dilators up to 3-4 inches. The dilation must be done slowly, to avoid tearing, and very thor-

oughly, as many of these cervices are extremely hard and unyielding. I do not see how dilatation can be done beyond 3-4 inches without grave risk of laceration. Curettage is not done except in definite cases of hyperplasia, when there is no co-existent inflammatory condition. The endometrium in the majority of these cases is normal, and promiscous curettage is very often a further factor in the condition of sterility we are seeking to correct. The stem is then inserted, secured with silver wire, a button at each end, and a shot. We have used various types of stems at different times, but have found the Baldwin glass stem the most uniformly satisfactory. It is easy to insert and remove, and is perfectly sanitary.

The patient is kept in the hospital for three days, to observe any post-operative reaction. She is then discharged, with orders to remain quiet for several days longer, then to resume her usual occupations, but to take no violent exercise. The stem is usually worn from four to eight weeks. The patient reports to the office to have it removed, or goes to her own physician if she is from out of the city.

As has been said, this report is based on 95 cases covering a period of 10 years. Thirteen patients were single, or 13.7 per cent, and eighty-two were married, or 86.3 per cent. The duration of marriage varied from 6 weeks (this patient consulted us for severe dysmenorrhea) to 19 years. Only 14 had been married 2 years or less, and of these one had previously been married 8 years and had had 2 induced abortions. The average duration of marriage was 5 years. The ages varied from 20 (3 patients) to 44 (one patient). The majority were between 25 and 30, and the average age was 27.6 years.

The dysmenorrhea was of primary origin in 56 of the cases, or 72.7 per cent. Blair Bell's figures for primary dysmenorrhea vary from 33 per cent to 97.5 per cent. an average of 64.1 per cent. Fourteen patients, or 18.2 per cent developed it after marriage, and 7 or 9.5 per cent developed it at intervals varying from 2 to 17 years after the onset of menstruation. The time was not stated in 18 cases.

In this series 28 patients, 29.5 per cent, of whom 13 were unmarried, complained of dysmenorrhea chiefly. All were primarily sterile. Nineteen, 20 per cent, complained of sterility chiefly. Of these 2 had had spontaneous abortions 5 and 8 years before; two had had induced abortions; one had had two induced abortions in a former marriage; one had used contraceptive measures. The remaining 46, 48.4 per cent, complained of both sterility and dysmenorrhea, and 2, or 2.1 per cent, complained of scanty menstruation also. All but 5 of the series, it will be noted, were primarily sterile.

Twenty-nine patients, 30.5 per cent, gave a history of previous acute infectious diseases in addition to the usual diseases of childhood. Thirteen had had previous dilatations and curettages (13.7 per cent), 2 of these after abortions. Thirteen had had abdominal operations (13.7 per cent), mainly appendectomies, though all but 4 included work on the uterus or ovaries.

The physical findings included pinhole os, undeveloped and infantile uterus, anteflexion, elongated cervix, retroversion, kinked canal, and long and short vagina. Twenty cases complained of leukorrhea, 11 had hyperplasia, and 5 endocervicitis. Cases of endocervicitis are no longer treated with the stem, as the risk of infection is considered too great for the possible benefit that might result.

In all cases the treatment was dilatation as described, plus curetage in the cases of hyperplasia, and the insertion of the stem. The Baldwin stem was used 67 times (73.7 per cent); the other types included the Gill Wylie, Watkins and Black, and in one case the gutta percha stem was used, the cervix being too small to admit any other kind. In 8 cases other operations were done, including appendectomy, internal and external Alexander suspensions, puncturing of ovarian cysts, and release of post-operative adhesions.

In 8 cases the stem fell out or had to be removed before the appointed time. In one case it was removed at the end of 2 weeks for temperature, later traced to a lung condition. One Gill Wylie stem was removed in 7 days for bleeding. Three Baldwin stems were removed at the end of 3 weeks for persistent discomfort. Three others fell out

after exertion or falls at 2, 4 and 6 weeks respectively. The other stems were worn from 2 weeks in one case to 6 months in one case, the average time being 7.1 weeks. Three patients reported excessive pain at the periods while the stem was in place. The others reported no discomfort of any kind. No case showed an abnormal rise of temperature or any other condition attributable to its use, and there was not a single case of infection. This is a distinct contrast to Dr. Hirst's report of 7 per cent of infections at the Woman's Hospital and even to Dr. Rawls' report of 3.9 per cent of infections.

Sixty-nine cases out of the 95 have been followed up over a period of one to 10 years, 72.6 per cent. Five other patients reported from 2 to 6 periods after operation painless, but have been lost sight of since and have not been included in this report. Of the 69 followed up, 63 were married, 91.3 per cent. Of these 23 have become pregnant, over 36.5 per cent of the possible cases. Three had only abortions, but the others are known to have had at least one full term pregnancy each. It is interesting to note that the two patients curetted after their early abortions never conceived again, and that the patients who had induced their early abortions and had used contraceptive measures also remained sterile. The patients who became pregnant had been married from 2 to 5 years, an average of 3.6 years. The ages varied from 21 to 36, an average of 28 years. The Baldwin stem was used 15 times, the Watkins 6, the Black once, and the gutta percha once. The findings included undeveloped uterus in 13 cases, pin-hole os in 4, acute anteflexion in 2, and kinked canal in 1. One of these cases had a profuse endocervicitis.

Of the patients who complained of dysmenorrhea, either chiefly or in connection with sterility, 74 in number, 58 have been followed up, 79.3 per cent. Eleven, 19 per cent, report no relief at all. Most of these gave a history of prolonged nervousness and constipation, and it was realized at the time of operation that these conditions, together with the strong neurotic element present, would make relief a very difficult matter. Twenty-one, 36.2 per cent report partial or temporary relief; of these 8 report complete relief for periods varying from 6 months to 6 years, and 10 report their general health markedly improved. It might be stated here that many of the patients who were partially or temporarily relieved state that with the relief they secured for several months their general health was so much improved that when the dysmenorrhea did recur it was much more easily endured and the reaction from it was prompt, instead of lasting almost to the next period, as had frequently happened before operation. Twenty-six patients, 44.8 per cent, were completely and permanetly relieved. Of these, 2 had previously required hypodermic relief practically every period. Twelve of this group report a marked improvement in their general health, with a gain in weight. The 2 cases of scanty menstruation report no change in the flow.

Of the cases which have been followed up, then, 36.5 per cent have become pregnant, 44.8 per cent have been permanently relieved of dysmenorrhea, and 36.2 per cent have been partially or temporarily relieved. Other advocates of the stem report cures of sterility in from 25 to 70 per cent of their cases, and of dysmenorrhea in from 40 to 90 per cent. In each instance I believe that the lower figures are more accurate. In view of the percentage of good results, however, together with the safety of the procedure in properly selected cases where no gross pelvic lesion exists, its ease of performance, and the very slight discomfort and inconvenience it causes the patient, I believe that dilatation with the use of the stem should certainly be considered in cases of dysmenorrhea, and sterility before any more radical procedure is undertaken.

BIBLIOGRAPHY

Rawls, Reginald M.—The status of the intrauterine stem pessary based on a study of 205 cases with end of results in 117 cases.—Am. Jour. Obs. and Gyn. Vol. I, No. 5, pp. 499-515.

Hirst, Barton Cooke—Some moot points in the diagnosis of the cases and in the treatment of sterility.—Am. Jour. Obs. and Gyn. Vol., IV, No. 1, pp. 162-165.

Macomber, Donald—The etiology of sterility in the female from an analysis of 500 case records.—Boston Med. and Surg. Jour. Vol. 167, Sept. 14,1922, pp. 397-401.

Giles, Arthur E.—The causes, prognosis and treatment of sterility.—Jour. Obs. and Gyn. of the Brit. Emp. Vol. 27, No. 2, pp. 241-250.

Norris, Charles G.—Sterility in the female without

marked gross pathology and the report of 25 cases—S. G. and O. Vol. 15, pp. 707 ff.
Bell, W. Blair—Intrinsic dysmenorrhea—Jour. Obs. and Gyn. of the Brit. Emp. Vol. 30, No. 2, pp. 117-161.

DISCUSSION.

Dr. E. Denegre Martin (New Orleans): This is a very interesting subject, especially due to the fact that today we are fighting birth control fanatics rather than attempting the cure of sterility. All surgeons have been confronted at times with these cases. Dr. Miller did not mention the Outerbridge drain, which I have used in a number of cases of sterility, and two, I recall, became pregnant within a few months, though sterile for several years after marriage. I personally prefer the self retaining hard rubber stem pessary, though it does slip out occasionally, to the Baldwin pessary which has to be held in place with silver wire. Sterility is not always due to stenosis and flexion alone, often flexion with retroversion or marked retroversion will prevent conception and unless both conditions are corrected failure is inevitable. In girls from 16 to 20 years of age dysmenorrhea is quite common. I do not know whether it is due to the character of exercise they take or to lack of exercise, but many are not only incapacitated during the menstrual period, but frequently suffer so that a sedative must be administered. In these cases I have given relief in at least 75 per cent and cured 50 per cent with the stem pessary. Best results, I believe, are obtained by leaving the pessary in situ for at least three months. Dr. Miller has discussed the subject so thoroughly and described the conditions calling for the use of the pessary as well as the precautions to be taken in its application, that it would be but a repetition of what was said to prolong the discussion.

Dr. Hilliard E. Miller (closing): in regard to the self retaining stem pessary as mentioned by Dr. Salatich, I will say that the retaining prongs of this pessary are made of steel, and as a rule after a short period of time, become coroded. Also if the prongs are sufficiently sparated to retain the pessary, they are apt to bring about a tissue necrosis at the cervical canal. Infection, as I have attempted to show in my paper, must be eliminated by a careful selection of cases, and the elimination of all evidence of infestion previous to the insertoin of the stem. I have stated that a very careful examination should be made of smears from the cervix and urethra, and the patient questioned carefully regarding the existence of either specific or other infections previous to the operation.

New Orleans Medical and Surgical Journal

JOURNAL COMMITTEE.

Lester J. Williams M. D.....Ex-Officio
Oscar Dowling, M. D.....Chairman
A. O. Hoefeld, M. D.....Vice-Chairman
H. W. E. Walther, M. D.....Editor and Secretary
H. B. Gessner, M. D. A. A. Herold, M. D.

COLLABORATORS—COUNCILORS.

S. M. Blackshear, M. D., New Orleans.
Geo. S. Bel, M. D., New Orleans.
F. T. Gouaux, M. D., Lockport.
A. A. Herold, M. D., Shreveport.
T. E. Wright M. D., Monroe.
W. R. Eidson, M. D., Baton Rouge.
V. A. Miller, M. D., Lake Arthur.
S. J. Couvillon, M. D., Moreauville.

P. T. Talbot, M. D., ...General Manager.

A. St. John Labry, Business Manager.

DR. PORTMANN.

Dr. Georges Portmann, Professor agrégé of the Medical Faculty of Bordeaux, France, visited New Orleans late in January while en route to Havana. Dr. Portmann was delegated by the French Government to visit the Ear, Nose and Throat Clinics of Canada and the United States, including in his tour Montreal and Quebec, New York, Boston, Philadelphia, Chicago, St. Louis, San Francisco, Los Angeles, New Orleans, and Havana. He lectured in all these cities on his original investigations on subjects related to the specialties of the Ear, Nose and Throat, and gave demonstrations of the original methods pursued in the special Senses Clinics of the Faculty of Bordeaux, which his chief, the eminent Professor E. J. Moure, has directed with great success for many years.

While in New Orleans he operated at the Eye, Ear, Nose and Throat Hospital, performing a successful laryngectomy for carcinoma under local and regional anesthesia by the Moure-Portmann method. As the special guest of the Eye, Ear, Nose and Throat Club of New Orleans, under the chairmanship of Dr. Henry Blum, he demonstrated Moure's method of operating for malignant tumors of the upper jaw, including the ethmoidal and orbital regions. He also presented a summary of his original researches on the functions of the ductus endo-lymphaticus, as studied comparatively in the small sting-ray fish. In this species, the duct comes up to the surface of the skin, where it is easily accessible to experimentation. The effects of injury, such as cauterization cause vertigo and other disturbances in co-ordination and locomotion characteristic of labyrinth disease was strikingly illustrated by charts, lantern slides and moving pictures. He also demonstrated the fundamental differences between the lesions of the cerebellum and those of the labyrinth.

The lectures and demonstrations were given in a lucid and masterful manner, which made them most instructive and enjoyable.

While in New Orleans, Dr. Portmann was the guest of Dr. Lynch and of the Staff of the Senses Hospital. At the Hospital he was especially interested in the demonstration of the original methods of laryngoscopy by suspension, bronchoscopy, esophagoscopy and other procedures devised by Dr. Lynch. He was also entertained socially by Dr. Chassaignac, Mrs. DeRoaldes, and Dr. Matas.

TYPHOID FEVER IN 1923.

The journal of the A. M. A. recently published its annual summary of typhoid death rates in the larger American cities. It is evident from the figures there given that the period of rapid reduction in this disease, which began about 1910 and lasted to about 1919, is now at an end. For the last five years the total rate for the whole group of cities with a population some-

thing over 25,000,000 has fluctuated within a rather narrow range, not above 4.0 and not below 3.2.

While some further improvement in typhoid death rates may be anticipated, there is one factor that is likely to make the control of this disease a more serious problem in the near future. There is every reason to believe that the sudden drop in typhoid rates following the war was due in large part to the typhoid vaccination effected on such a large scale in the army camps. The new group of young men now reaching the age of typhoid susceptibility is not so well protected. Possibly also the effect of the army vaccinations is now wearing off, although there is no proof of this. It is, of course, problematic to what extent a typhoid increase for these reasons may be counterbalanced by improved methods of administrative control.

It is plain that the cities in our Southern States are having more trouble in bringing about typhoid decrease than are the Northern cities. Such cities as Memphis, Atlanta, Nashville and Dallas may, however, well be encouraged to renew their efforts by the success achieved by such cities as Richmond, Baltimore and particularly Louisville, and more recently by Birmingham and New Orleans.

The measures for effecting typhoid control are now about as well known as those for yellow fever: general sewerage, filtration or chlorination of water supplies, pasturization of milk, and wherever these measures are effectually carried out, control of carriers. So long as rural typhoid persists at its present level, the cities will have to suffer for sins of sanitation not their own; but the success already obtained in certain municipalities over a considerable period of years demonstrates that, with methods now known and under conditions now prevailing, the average typhoid rate for this whole group of cities ought to be and probably can be reduced to about half its present figure. This may take a decade or two, but it is surely coming.

NEWS AND COMMENT

The Mississippi-Louisiana-Arkansas sections of the American College of Surgeons met in joint session for their annual conference at the Hotel Edwards, Jackson, Miss., on January 25-26, 1924. Interesting clinics were held in the mornings at the various hospitals in Jackson, and round table conferences occupied the afternoon and night sessions. The guests attending the meeting were: Dr. W. C. MacCarty, Mayo Clinic, Rochester, Minn., and Dr. J. T. Case, Battle Creek Sanitarium, Battle Creek, Mich., both giving several valuable talks. Dr. M. T. MacEachern, Chicago, and Dr. Allan Craig, Chicago, represented the College. Mr. Robert Jolly, Superintendent, Baptist Hospital, Houston, Texas, made an interesting talk on hospital standardization. Dr. C. W. Allen, New Orleans, and Dr. J. D. Spellman, Superintendent, Touro Infirmary, New Orleans, addressed the meeting. Other Louisiana members of the College in attendance were: Doctors F. W. Parham, C. Jeff Miller, H. W. E. Walther, C. G. Cole, J. F. Dicks, T. B. Sellers, L. H. Landry, W. B. Chamberlin, L. B. Crawford, J. C. Willis, C. H. Mosely, I. J. Newton, and R. O. Simmons. The executive committee for Louisiana for the coming year, elected at this meeting, are: Dr. J. C. Willis, Shreveport, chairman; Dr. C. G. Cole, New Orleans, secretary, and Dr. L. B. Crawford, Patterson, counselor.

Monthly Bulletin of the Shreveport Medical Society.

February meeting of Shreveport Medical Society, Tuesday, the 5th, at Charity Hospital, at 8 p. m.

February 5th, program by North Louisiana Staff.

March 4th, program by Highland Sanitarium Staff.

April 1st, program by Schumpert Sanitarium Staff.

Committees for 1924.

Ethics: Drs. S. C. Barrow, A. P. Crain, F. J. Frater, T. R. Ragan, N. W. Sentell.

Program: All of officers and Drs. J. A. Hendrick, Louis Abramson, S. C. Barrow, A. J. Thomas, A. G. Heath.

Entertainment: Drs. F. H. Walke, J. M. Bodenheimer, W. S. Kerlin, C. C. Rigby.

Memorial: Drs. A. A. Herold, M. F. Smith, T. E. Williams.

Committee on Revision of Constitution and By-Laws: Drs. J. S. Knighton, A. A. Herold, S. C. Barrow, E. L. Sanderson, J. M. Bodenheimer.

Library: Dr. S. W. Boyce.

Charity Hospital, January 10, 1924.

The Shreveport Medical Society was called to order by President Butler at 8:06. Minutes of the last meeting were read and approved. Fifty-one members were present.

Scientific Program.

The Charity Hospital staff had charge of the scientific program. The general subject was generalized miliary tuberculosis with presentation of histories, physical findings, laboratory data progress, and autopsy findings with specimens of three patients, ages one year, one and a half years, and twenty-four years. One patient from the wards was shown. General discussion by Drs. Thomas, I. Henry Smith, Picard, Gowan, Knighton, Young, W. S. Kerlin, Lucas, Sanderson. Following the general discussion, Dr. Rauls, who had charge of the presentations, read a paper summerizing generalized miliary tuberculosis.

Dr. Rigby presented a patient, a six-year-old boy, with a tumor of the tongue. General discussion followed.

New Business.

Election of delegates and alternates. Drs. Knighton, Adams, Lloyd, Barrow and Sanderson were nominated for delegates. A motion was made, seconded and passed that nominations be closed and these five be elected by acclamation. Drs. Crain, Picard, Bodenheimer, J. J. Frater and Rougon were nominated for alternates. A motion was made, seconded and passed that nominations be closed and that these five be elected by acclamation.

Dr. Sanderson called attention to the

desirability of the medical profession keeping out of politics and offered a resolution incorporating this. His resolution was seconded by Dr. Heath. Discussion by Drs. Knighton and Bodenheimer. Dr. Herold made a motion that the resolution be tabled. The motion was seconded by Dr. Knighton. The motion to table the resolution was passed.

Dr. Knighton made a motion that the resolutions adopted by the Medical Advisory Board of Shreveport Charity Hospital January 4, 1924, be adopted by the Shreveport Medical Society. Motion seconded by Dr. Herold. Dr. Lloyd made a motion that Dr. Knighton's motion be tabled. Motion seconded by Dr. Bodenheimer. Dr. Lloyd's motion passed.

Following this action the secretary, on request, read the resolution adopted by the Medical Advisory Board of the Shreveport Charity Hospital, January 4, 1924, which incorporated approval of the present system of management of State hospitals and sending of a copy of the resolution to the three candidates for governor of the State of Louisiana. Dr. Sanderson made a motion that the above action of the society be given to the press. Motion seconded by Dr. Rigby. Dr. Lloyd made a substitute motion, which was accepted that the Shreveport Medical Society go on record as taking no action on the resolution of the Medical Advisory Board of the Shreveport Charity Hospital.

The Society was adjourned at 10:45.

ROBT. T. LUCAS,
Secretary.

Invitation.

All those interested are cordially invited to be present at the Annual Congress on Medical Education, Medical Licensure, Public Health and Hospitals, March 3, 4 and 5, 1924; Florentine Room, Congress Hotel, Michigan Avenue and Congress street, Chicago.

Program of the fifth annual meeting of the Louisiana State Radiological Society at New Orleans, La., January 19th, 1924.

Officers of the Society: Lucien Fortier, M. D., president; C. P. Rutledge, M. D., vice president; Harold G. F. Edwards, M. D., secretary-treasurer.

Morning session, January 19th, at 10 a. m., at Hotel Roosevelt.

Executive Session.

President's address, reading of minutes, unfinished business, report of officers and committees, election of new members, election of officers, new business, adoption of new Constitution and By-Laws.

Afternoon session, January 19th, at 2 p. m., X-ray Clinic of Dr. Amédeé Granger, at Charity Hospital.

Evening session, January 19th, 7:30 p. m., held at Hutchinson Memorial, 1551 Canal street.

Scientific Program.

1. Title unannounced, A. J. Pacini, M. D., Chicago.
2. "Report of a Case of Myeloma" (with lantern slide demonstration), C. P. Rutledge, M. D., Shreveport.
3. "The Necessity of Standardization of Radiographic Technique," G. C. McKinney, M. D., Lake Charles.
4. Title unannounced, A. Henriques, M. D., New Orleans.
5. "Therapeutic Application of Roentgen Rays," Harold G. F. Edwards, M. D., Lafayette.
6. "Radiological Findings in Leprosy," L. J. Williams, M. D., Baton Rouge.
7. Demonstration of Films and Slides by members of the Society.

National Conference on Vocational Rehabilitation of Civilian Disabled, February 4-8, 1924, Washington, D. C., Hotel Hamilton.

Whisky as Medicine.

Announcement has just been made by Fullerton Cook, chairman of the Revision Committee of the United States Pharmacopoeia, that standards for whisky and brandy as medicines will be included in the new Pharmacopoeia now being revised. This is in response to a demand by the physicians of the country.

Under the national prohibition laws, whisky and brandy are classed as medicines and as such are legally prescribed in many cases of serious illness, but at

the present time no legal standards exist for their purity.

All physicians of the General Revision Committee, acting as a sub-committee were appointed to study the situation and take the necessary action. This sub-committee has issued the following statement:

"In view of the fact that a large number of physicians in the United States believe alcohol to be a valuable therapeutic agent, and in view of the widespread adulteration of the alcoholic liquors at present available, the members of this Referee Committee feel that for the protection of the public there should be an official standard for medicinal spirits."

By including standards for whisky and brandy as medicines, in the Pharmacopoeia, which is the legal standard for drugs and medicines under the Food and Drugs Act, the machinery of the United States Department of Agriculture and of the Boards of Health and Boards of Pharmacy throughout the country is enlisted in protecting the sick against adulterated and poisonous products.

State Meeting Reservations.

The chairman of the Committee of Arrangements for the approaching meeting of the Louisiana State Medical Society requests that members send in their reservation at once for hotel accommodation for the approaching meeting of the Louisiana State Medical Society. By doing this it will simplify very much the designation for room space, and will aid the committee materially in being able to locate every one in a suitable place. The meeting is to be held in Opelousas, April 22nd, 23rd and 24th, 1924. House of Delegates convenes on April 21st.

Chairmen of Sections for the Approaching Meeting of the Louisiana State Medical Society at Opelousas, La.

Medicine and Therapeutics—Dr. Geo. S. Bel, New Orleans.

Pediatrics—Dr. Louis I. Tyler, Baton Rouge, La.

Nervous Diseases—Dr. John N. Thomas, Pineville, La.

Bacteriology and Pathology—Dr. E. O. Trahan, Baton Rouge, La.

Health and Sanitation—Dr. E. M. Ellis, Crowley, La.

General Surgery—Dr. R. C. Kemp, Baton Rouge, La.

Gynecology and Obstetrics—Dr. Maurice Gelpi, New Orleans, La.

Eye, Ear, Nose and Throat—Dr. C. A. Weiss, Baton Rouge, La.

Urology—Dr. Paul J. Gelpi, New Orleans, La.

Dermatology—Dr. J. N. Roussel, New Orleans, La.

Radiology—Dr. T. I. St. Martin, Houma, La.

New Orleans, La., February 9.—Nation-wide participation in the competition by the Hibernia Bank & Trust Company of New Orleans to obtain feasible methods of combatting the menace of the boll weevil through prizes offered for the five best essays submitted before March 15th, is indicated by the fact that with the proposition still within five weeks of its completion, answers and suggestions have been submitted from 13 states and the city of Washington.

The President of the Orleans Parish Medical Society, Dr. Chaille Jamison, appointed Dr. Homer Dupuy general chairman of the committee to entertain the Southern Medical Association in New Orleans, during the month of November.

Additions to the hospital facilities of this City will soon be completed. The new building of Touro Infirmary and two floors of the main building of Hotel Dieu are about finished.

Dr. T. M. Van Studdiford has completed a Post Graduate course taken at the Columbia University, Vanderbilt Clinic, and Bernard Skin and Cancer Hospital, St. Louis, Missouri, and is now located in New Orleans.

Monthly Bulletin of the Orleans Parish Medical Society.

The Society held two meetings during the month of February.

February 11th, the following papers were presented:

"Syphilis and Pregnancy"....
By .....Dr. E. L. King.
"Promotions in the Medical Reserve Corps," by Dr. Robert Shackleford, Major, U. S. Army.
"Relative Value of Percussion and X-Ray in Cardiology"
By .....Dr. A. E. Fossier.

February 25th, the following papers were presented:

"The Value of Roetgen Ray in the Diagnosis of Gall Stones"
By .....Dr. Leon J. Menville.
"Further Observations of the Operative Cure of Colitis Ani and Vulvae"
By .....Dr. Carroll W. Allen
"Some Suggestions in Physical Diagnosis"
By .....Dr. O. W. Bethea.

New Members. The Board of Directors, at its last meeting, elected Dr. W. N. Floyd and Dr. Elliott Kiblinger to active membership, and Dr. Larry J. Dupuy to associate membership.

The Chairman of the Scientific Essays Committee has sent out a circular letter. Prompt replies will facilitate the preparation of the program for the year.

Dues for the Louisiana State Medical Society were payable January 1st. To date very few of our membership have qualified. Your attention is called to this very important matter.

Librarian's Report for January

The work of the Library, coincident with the first of the year, has been particularly heavy. 65 volumes of journals have been prepared and sent to the National Library Bindery Co., of Atlanta, whose work has been formally approved. 120 books have been cataloged. Of these 22 were received by 1923 subscription, 1 by purchase, 1 by bindery, 12 by Gift and 23 from the New Orleans Medical and Surgical Journal. 164 pamphlets have been added to our files.

A meeting of the Library Committee was held on January 19th at which three members were present. A budget of $1,975 was presented, based on the expenditures of 1923, and approved by the Committee, with the proviso that effort should be made to live within the actual income of the securities. It was decided to renew the subscription to the American Institute of Medicine abstracts, at the special price of $160.00 which had been made to us as a subscriber to the entire series.

Bulletin of the Louisiana State Medical Society.

The meeting of the Louisiana State Medical Society to be held in Opelousas, April 22nd, 23rd, and 24th, House of Delegates convening on April 21st, will no doubt be one of great scientific opportunities, and accompanied by unusual entertainment. It would be natural to presume that visiting such a remarkable and historical part of our State, that each and everyone of us contemplating attending the sessions should arm ourselves with a review of its history, so that we may be in a position to enjoy and appreciate them. With this object in view, through the generosity of the Journal Committee and its editor, Dr. H. W. E. Walther, it has been arranged that the April issue of our Journal will be made a special feature carrying an abundant supply of information concerning Opelousas, St. Landry Parish, and a review of the picturesque Southwest Louisiana.

Through the activities of Dr. Fred J. Mayer, Chairman of the Arrangement Committee, unusual plans are being made for our entertainment. A detailed account of these will be published in the April issue of the Journal. You may rest assured that the social entertainment will be all one might desire. The Arrangement Committee are now actively engaged in making preparations for the comforts of all those attending. *Dr. Fred J. Mayer requests that all those desiring to attend the session should communicate with him at once, so that he may see that suitable quarters may be reserved.* It is essential that you attend to this at once, so that the committee may not be handicapped in its functions. We are especially fortunate at this Annual Meeting to have with us two representatives from the American Medical Associa-

tion. Their names have not yet been supplied, but will be announced as soon as I am informed. This will afford the members of our Society the opportunity of having a personal contact with some of the Board of Directors of the American Medical Association. Their presence and influence should be of material assistance to us, both in the legislative and scientific affairs of our Society. The headquarters for the Annual Meeting will be at the Court House. Registration room will be on the lower floor of the new Court House.

Partial Program of Opelousas, Meeting

Section on Medicine and Therapeutics.

Dr. George S. Bel, Chairman, New Orleans.

1.—"Pneumonia From the Standpoint of the General Practitioner," Dr. S. B. Wolf, Opelousas.

2.—"The Acute Abdomen," Dr. A. A. Herold, Shreveport.

3.—"Case Report of Tumor Involving Carotid Sheath Presenting Some Interesting Diagnostic Problems," Dr. J. E. Knighton, Shreveport.

4.—"Splenectomy For the Cure of Purpura Hemorrhagica," Dr. I. I. Lemann, New Orleans.

5.—"The Clinical Diagnosis of Pancreatic Disease," Dr. Daniel N. Silverman, New Orleans.

6.—"Percussion of the Heart," Dr. A. E. Fossier, New Orleans.

7.—"Lobar Pneumonia," Dr. C. W. Johnson, Monroe.

Section on Pediatrics.

Dr. Louis I. Tyler, Chairman, Baton Rouge.

1.—"Epidemic Vomiting in Children," Dr. M. S. Picard, Shreveport.

2.—"Feeding Problems," Dr. C. J. Bloom, New Orleans.

3.—"Clinical Observations On Prevailing Grippal Infections Among Infants and Children," Dr. M. Loeber, New Orleans.
Collaborating: Drs. J. E. Pollock and F. W. Dearman, Jr., New Orleans.

Section On Nervous Diseases.

Dr. John N. Thomas, Chairman, Pineville.

1.—"The Rehabilitation of the Recovered Patient," Dr. David H. Keller, Medical Director, Louisiana Hospital for Insane, Pineville.
To open discussion, Dr. John D. Young, Shreveport; Miss Betty C. Britton, Social Service Worker, State Hospital, Jackson, La.

2.—"Some Observations from the Neurological Clinic," Dr. L. L. Cazenavette, New Orleans.
To open discussion, Dr. Joseph O'Hara, New Orleans; Dr. C. V. Unsworth, New Orleans.

3.—"Syringomyelia and Possibilities To Be Learned From the Study of Its Pathology in Regards to Neuro-Surgery," by Dr. John D. Young, Shreveport.
To open discussion, Dr. W. J. Otis, New Orleans; Dr. E. McC. Connely, New Orleans.

Section On Bacteriology and Pathology.

Dr. E. O. Trahan, Chairman, Baton Rouge.

No program received to date.

Section On Public Health and Sanitation.

Dr. E. M. Ellis, Chairman, Crowley.

1.—"Analysis of Some Morbidity Reports," Dr. Oscar Dowling, New Orleans.

2.—"Malaria in the Seventh District," M. A. Barber, Ph.D., Crowley. Special Expert, U. S. Public Health Service.

3.—"Tuberculosis," Dr. Wallace Durel, Covington.

4.—"Crude Statistics," Dr. George Dempsey, New Orleans.

Section On General Surgery.

Dr. R. C. Kemp, Chairman, Baton Rouge.

1.—"Minor Injuries of the Hand," Dr. E. Denegre Martin, New Orleans.

2.—Anastomosis of the 11th to 7th Cranial Nerves to Correct Facial Paralysis," Dr. J. T. Nix, New Orleans.

3.—"Resection of the Rectum With Normal Restoration of the Bowel at the Anal Outlet," Dr. Carroll W. Allen, New Orleans.

4.—"Appendectomy Under Local Anes-

thesia," Dr. R. B. Wallace, Alexandria.

5.—"Acute Obstruction of the Bowels," Dr. E. M. Ellis, Crowley.

6.—"Fractures of the Base of the Radius: Method of Treatment and End Results," Dr. Isadore Cohn and Dr. Paul G. Lacroix, New Orleans.

7.—"Diagnosis and Surgical Treatment of Congenital Hypertrophic Pyloric Stenosis, with Report of Cases," Dr. Thomas B. Sellers, New Orleans.

Section On Gynecology and Obstetrics.

Dr. Maurice J. Gelpi, Chairman, New Orleans.

1—"Extra Uterine Pregnancy," Dr. O. P. Daly, Lafayette.

2.—"Diagnosis in Gynecology," Dr. Paul Michinard, New Orleans.

3.—"Speaking of Caesarean Sections," Dr. Louis B. Crawford, Patterson.

4.—"Version Versus Forceps," Dr. Lucien A. LeDoux, New Orleans.

Section on Eye, Ear, Nose, Throat, and Stomatology.

Dr. C. A. Weiss, Chairman, Baton Rouge.

1.—"Stricture of Esophagus Produced by Lye," Dr. R. C. Lynch, New Orleans.
To open discussion, Dr. A. I. Weil, New Orleans; Dr. A. B. Moise, New Orleans.

2.—"More Recent Ophthalmic Progress," Dr. Charles Bahn, New Orleans.
To open discussion, Dr. D. C. Iles, Lake Charles; Dr. F. C. Bennett, Monroe.

3.—"The Eye and the Clinician," Dr. T. J. Dimitry, New Orleans.
To open discussion, Dr. A. L. Whitmire, New Orleans; Dr. Brown Larose, New Orleans.

4.—"Dysphonia, As Expressing Disease Remote From the Larynx," Dr. Homer Dupuy, New Orleans.
To open discussion, Dr. J. F. Mouton, Lafayette; Dr. E. R. Gandy, Alexandria.

5.—"Mastoid As a Problem of the General Practitioner," Dr. Edwin Whitaker, Baton Rouge.
To open discussion, Dr. M. P. Boebinger, New Orleans; Dr. G. W. Blackshear, New Orleans.

Section On Urology.

Dr. Paul J. Gelpi, Chairman, New Orleans.

1.—"Three Renal Cases With Uncommon Pathology," Dr. P. Jorda Kahle, New Orleans, La.

2.—"A Plea For More Frequent Operative Interference in Urethral Stricture," Dr. Abraham Nelken, New Orleans.

Section On Dermatology.

Dr. J. N. Roussel, Chairman, New Orleans.

1.—"The Use and Abuse of X-Rays in the Treatment of Common Skin Disease," Dr. Earl D. Crutchfield, Galveston, Texas.
To open discussion, Dr. J. N. Roussel, New Orleans.

2.—"The More Common Dermatoses due to Occupational and External Irritants," Dr. R. T. Van Studdiford, New Orleans.
To open discussion, Dr. Henry Menage, New Orleans.
New Orleans.

Section on Radiology.

Dr. T. I. St. Martin, Chairman, Houma.

1.—"Radio-Dermatitis and its Treatment," Dr. A. U. Desjardins, Rochester, Minnesota.

2.—"Important Physiotherapeutic Principles," Dr. A. J. Pacini, Chicago, Illinois.

3.—"The Roentgen Ray Treatment of Diseased Tonsils and Adenoids," Dr. Harold G. F. Edwards, Lafayette.
To open discussion, Dr. S. C. Barrow, Shreveport.

Removals: Dr. C. W. Lewis from Chataignier to Eunice, La. Dr. G. M. Harris from Magde, to Cheneyville, La. Dr. R. J. Mailhes from 4115 Dumaine street to 1525 Hillary street, New Orleans, La.

Died: On January 22nd, at Biloxi, Mississippi, Dr. J. O. Pratt, formerly of New Orleans, aged 42 years.